

A suggested vision of crisis management of swimming pools

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Research Introduction & Problem

Crisis management is considered one of the main elements of any administration's success or failure; as risk accompanies any athletic administration either from the technical or the administrative aspects. It is wrong to think that the leader can fully secure his administration from risks; the leader's responsibility lies in reducing the occurrence of crises or predicting the risks that accompany the activity or the administration.

Crisis management requires quick response and admitting the truth, also challenging the crisis and facing it is always better than escaping, the administration should also admit another truth which is that watch pointers always move forward, and that time never goes back. **(10)**

Crisis management is nothing but the result of absence of planning, policies or strategies; as administration does not

move unless there is a crisis. **(2)]**

It is necessary for any establishment that is keen on continuing its progress to make a continuous evaluation of all aspects of work in it; as evaluation and its programs became in the modern age relevant to all the operations played by the educational establishments. Because without it, you can't know the reasons of the success achieved or the difficulties you may face, consequently, no development can be done.

(1)]

When the crisis occurs, it requires taking the hardest and quickest decisions; the main characteristic of leading the crises is to keep things simple and to ask people to do things or works they are trained on and not to do new and unusual works. **(3)]**

There are many difficulties face the directors of swimming pools which cause lots of crises, for example,

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when a fire occurs in the swimming pools or a drowning or chlorine leaking or electric damage or lighting black out during training, swine flu and its role in reducing practice in the swimming pools or few numbers of activity practices or the crises that may happen in the interior tournaments or any other expected crises.

Therefore, we must put a strategic vision to help administrations, and directors of swimming pools in particular to manage the crisis and to know the reasons behind its occurrence and how to avoid it and manage it using scientific methods and to evaluate it in order to avoid its occurrence again.

Research Aims:

Research aims to make a suggested vision to manage the crises which swimming pools face through recognizing the following:

- 1- The reasons of crises in swimming pools.
- 2- Avoiding crises in swimming pools.
- 3- The scientific method of crises management in swimming pools.
- 4- Evaluation methods of administration performance in swimming pools.

Research Questions:

- 1- What are the reasons of crises in swimming pools?
- 2- How to avoid the crises in swimming pools?
- 3- What is the scientific method of crises management in swimming pools?
- 4- What are the evaluation methods of management performance in swimming pools?

Research Term:

Crises Management: is the ability of the decision maker to manage the crisis, before, during and after its occurrence, and to avoid its negative side and benefit from the positive one.

[Mahmoud Abu Samra, Mohammed Eltity, and Faten Ashour (2012), (10)]

Research Procedures:

First: research Method:

The researcher used the descriptive method “survey study” as it suits the nature of the research.

Second: Research Society & Sample

A- Research Society:

The research society of this study represents “directors – deputy directors – administrative staff – rescuers” in the clubs’ swimming pools of both governorates of (Cairo – Giza).

B- Research Sample:

The research sample of this study is represented in “directors – deputy directors – administrative staff – rescuers” in the clubs’ swimming pools; their number was (101), the researcher chose the research sample deliberately.

Third: Tools of Data Gathering:

A- Scientific References & Researches:

The researcher reviewed many scientific references and researches and the previous

studies that addressed the fields of administration, athletic administration, tests and measurements, and the crises management in the athletic field.

B- Designing the questionnaire form:

The researcher designed a study questionnaire form of “a suggested vision of crises management in swimming pools”, the researcher used the steps of questionnaire building according to the rules of scientific research.

C- Knowing the experts’ opinions:

The researcher put the suggested phrases in the questionnaire form, then, it was displayed on (5) experts in the field of athletic administration, enclose (2).

Table (1)

The percentage of expert's agreement on questionnaire axes N= 5

No.	Axes	Experts' opinion agreement	percentage
1	Reasons of crises occurrence in swimming pools.	5	100%
2	Factors of safety & security in swimming pools.	3	60%
3	Avoiding crises in swimming pools.	5	100%

Follow Table (1)
The percentage of expert's agreement on questionnaire axes N= 5

No.	Axes	Experts' opinion agreement	percentage
4	How to prepare for crises management in swimming pools.	2	40%
5	The scientific method of crises management in swimming pools.	5	100%
6	The evaluation methods of crises management in swimming pools.	5	100%

Table (1) show that the axes of the questionnaire “**a suggested vision of crises management in swimming pools**” have been determined, its relative importance percentage was between (40% - 100%) though the results of the experts’ poll form, the researcher approved the percentage (100%) to determine the preliminary axes of the questionnaire form.

Then, the researcher put the phrases of the open questionnaire form; its number was (51) phrases distributed on (4) axes, and she displayed the phrases of each axis on the experts; enclose (3) to check

the reasonable validity and that the suggested phrases are suitable for each axis, and how far are the suggested phrases formation suitable for the axis they belong, and how far can we omit, adjust or add other phrases. Through knowing the experts’ opinions, the researcher could determine the relative importance of the experts’ agreement,

The next table clarifies the number of the 2 questionnaires phrases in their preliminary shape and the number of the omitted phrases and their figures according to knowing the experts’ opinions.

Tables (2)

The number of questionnaire's phrases in its preliminary shape and the number of the omitted phrases and its figures according to the percentage of experts' opinions

No.	Axes	Number of axis's preliminary phrases	Number of omitted phrases	Number of initial phrases	figures of omitted phrases
1	Reasons of crises occurrence in swimming pools.	١٥	١	14	8
2	Avoiding crises in swimming pools	١٢	١	11	10
3	The scientific method of crises management in swimming pools	١٢	١	11	6
4	Evaluation methods of administration performance in swimming pools	١٢	—	12	--
Total		51	٥١	48	

Table (2) shows the number of questionnaire's phases in its preliminary shape, the number of the omitted phrases from each axis, the number of the axis's phrases after excluding the omitted phrases and the figures of the omitted phrases according to the percentage of experts' opinions.

Thus, the total number of questionnaire's phrases "**the suggested vision of crisis**

management in swimming pools" became (48) phrases.

Fourth: the Scientific Transactions of the questionnaire:

1- The studies form validity:

(A) the judges' validity (the reasonable validity):

The researcher used the judges' validity (the reasonable validity), as the form in its preliminary shape enclose (3) was displayed on (5) experts (judges), and the researcher

considered the percentage of experts' agreement on the questionnaire's phrases a proof of its validity.

(B) Validity of internal consistency:

The researcher also calculated the validity of the studied questionnaire form through using the method of internal consistency validity. As the researcher calculated the value of correlation coefficients

between the degree of each phrase aside, and the total degree of the questionnaire, and also calculated the value of the correlation coefficients of each phrase aside, and the total degree of each axis to which it belongs. All of this was done after applying the questionnaire form on the study pilot sample; tables (3, 4, and 5) show that.

Table (3)

The correlation coefficients between the total scores of each axis and the total degree of the questionnaire (N= 20)

No.	Axes	Correlation coefficient and its significance
1	Reasons of crises occurrence in swimming pools.	*, 998
2	Avoiding crises in swimming pools	*, 996
3	The scientific method of crises management in swimming pools	*, 996
4	Evaluation methods of administration performance in swimming pools	*, 999

* (R) table value at morale level (0.05), freedom degree (18)= (0.444).

Table (3) shows that the values of correlation coefficients are significant at morale level (0.05), as the values of correlation coefficient were between (0.999 – 0.996).

2-The Reliability of the studied form:

The researcher found the reliability coefficient of the questionnaire's axes; their number was (4) axes and the number of their phrases was (44); using two methods: the method of half segmentation of the study pilot sample responses on the questionnaire using the **Spearman & Brown**

equation to find the correlation coefficient between the even phrases and odd phrases, and also to find the reliability using the **Cronbach`s alpha coefficient**.

(a) Reliability using Cronbach`s alpha coefficient:
The value of **Cronbach`s alpha coefficient** of the phrases of questionnaire “**crises management in swimming pools**” ; which its number was (44), the value was (0.986).

***the Value of (Cronbach`s alpha coefficient) of the questionnaire = (0.986).**

Table (4) shows the (Cronbach`s alpha coefficient)

of the (questionnaire`s) phrases and all of them are significant, as its (Cronbach`s alpha coefficient) was (0.987) which are insignificant values; because it is bigger than the (Cronbach`s alpha coefficient) of the questionnaire which requires omitting them as they affect the reliability of the questionnaire. The rest of the questionnaire`s phrases were significant as the (Cronbach`s alpha coefficient) value of these phrases were between (0.985 – 0.982); which is less than the (Cronbach`s alpha coefficient) value of the questionnaire which indicates its reliability.

**Tables (5)
Reliability coefficient using Cronbach`s alpha of the questionnaire`s axes phrases**

No.	axes	(Cronbach`s alpha coefficient)
١	Reasons of crises occurrence in swimming pools.	*٠.٩٤٢
٢	Avoiding crises in swimming pools	*٠.٩٥٣
٣	The scientific method of crises management in swimming pools	*٠.٩٣٧
٤	Evaluation methods of administration performance in swimming pools	*٠.٩٣٦

* the value of Cronbach`s alpha coefficient of the questionnaire = (0.986).

Table (5) shows the Cronbach`s alpha coefficient between all the axes and the questionnaire as a whole, and all of them are significant; as the value of Cronbach`s alpha

coefficient of the axes was between (0.953, 0.936) which is smaller than the value of Cronbach`s alpha coefficient of the questionnaire (0.986) which indicates its reliability.

(a)Reliability using half segmentation:

The researcher found the reliability coefficient of the

questionnaire`s phrases; its number (44) using the method of half segmentation of the study pilot sample responses using **Spearman & Brown equation** to find the correlation coefficient between the even and the odd phrases.

**Table (6)
The reliability of the half segmentation of the measurement**

Questionnaire	Odd phrases		Even phrases		Correlation coefficient	Table "R"
	M	S	M	S		
Crises management in swimming pools	101.80	28.38	98.40	27.00	*0.995	0.444

Table (6) shows that there is a statistical significant correlation between the measurement phrases as a whole. This indicates the measurement`s reliability.

The next table shows the number of the two questionnaires phrases in their final shape and the number of the omitted phrases and their figures according to the experts` opinions.

**Table (7)
Number of questionnaire`s phrases in their final shape and the number of the omitted phrases and their figures after performing the scientific transactions "validity – reliability"**

No.	Axes	Number of axis phrases	Number of omitted phrases	Final Number of axis phrases	Figures of omitted phrases
١	Reasons of crises occurrence in swimming pools.	١٤	١	١٣	١١
٢	Avoiding crises in swimming pools	١١	١	١٠	٨

Table (7)
Number of questionnaire’s phrases in their final shape and the number of the omitted phrases and their figures after performing the scientific transactions “validity – reliability”

No.	Axes	Number of axis phrases	Number of omitted phrases	Final Number of axis phrases	Figures of omitted phrases
٣	The scientific method of crises management in swimming pools	١١	١	١٠	٤
٤	Evaluation methods of administration performance in swimming pools	١٢	١	١١	٦
Total		48	٤	44	

Table (7) shows the number of the questionnaire’s phrases in its final shape, the number of the omitted phrases from each axis, the number of the axis phrases after excluding the omitted phrases and the figures of the omitted phrases according to the percentage of experts’ opinions.
 - Thus, the total number of the final questionnaire phrases “a

suggested vision of crises management in swimming pools” became (44) phrases.

Eighth: Display & Discussion of Results:

First: Display of Results:

1- Displaying the results of the study sample responses to the axis phrases “reasons of crises occurrence in swimming pools”.

Table (8)
Repetition, percentage, (ca2) value and phrases order of the study sample responses to the axis phrases “reasons of crises occurrence in swimming pools” N= 81

No.	Phrases	Agree		To some extent		disagree		Estimated total	Relative weight	Ca2	order
		repetition	%	Repetition	%	repetition	%				
1- The lack of coordination between the swimming pool administration and the following:											
a-	• The technical teams	٤٥	٥٥,٥٦	٦	٧,٤١	٣٠	٣٧,٠٤	١٤٧	٦٠,٤٩	*٢٨,٦٧	٢٧
b-	• Athletic activity administration	٤٣	٥٣,٠٩	٧	٨,٦٤	٣١	٣٨,٢٧	١٥٠	٦١,٧٣	*٢٤,٨٩	٢٦
c-	• Social activity administration	٢٠	٢٤,٦٩	١٢	١٤,٨١	٤٩	٦٠,٤٩	١٩١	٧٨,٦٠	*٢٨,٠٧	١

Follow Table (8)
Repetition, percentage, (ca2) value and phrases order of the study
sample responses to the axis phrases “reasons of crises occurrence
in swimming pools” N= 81

No.	Phrases	Agree		To some extent		disagree		Estimated total	Relative weight	Ca2	order
		repetition	%	Repetition	%	repetition	%				
2- Lack of sufficient scientific qualification of workers in the swimming pool:											
a-	• Maintenance workers.	£1	0.62	∧	9.88	32	39.01	103	62.96	*21.06	2.
b-	• Rescue.	£1	0.62	9	11.11	31	38.27	102	62.00	*19.80	21
c-	• Coaches.	2£	29.63	1£	12.28	£3	37.09	181	74.49	*16.17	2
3- Lack of alternative plans to be used when a crisis occurs:											
a-	• Absence of rescuers.	£3	37.09	6	7.41	32	39.01	101	62.1£	*23.7£	23
b-	• Electricity cuts.	22	27.16	39	£8.10	2.	2£.69	16.	60.8£	*8.17	1.
c-	• Cold weather.	12	1£.81	00	67.9.	1£	17.28	16£	67.£9	*£3.63	7
d-	• A crisis with the members.	18	22.22	£0	00.06	18	22.22	162	66.17	*18.1.	8
e-	• Other.	2.	2£.69	01	62.96	1.	12.30	102	62.00	*33.80	21
4- Parents interference in matters of the swimming pool:											
a-	• Pool administration.	37	£0.68	1.	12.30	3£	£1.98	109	60.£3	*16.22	11
b-	• Coaches.	32	39.01	1£	12.28	30	£3.21	160	67.9.	*9.06	6
c-	• Rescuers.	£1	0.62	1.	12.30	3.	37.0£	101	62.1£	*18.3.	23
d-	• Other.	2.	2£.69	£7	08.12	1£	12.28	106	6£.2.	*22.89	13
5- Lack of regulations:											
a-	• Being on the swimming pool.	30	£3.21	1£	12.28	32	39.01	109	60.£3	*9.06	11
b-	• Dealing with the coaches.	2£	29.63	22	27.16	30	£3.21	173	71.19	3.63	0
c-	• Dealing with the workers.	18	22.22	01	62.96	12	1£.81	106	6£.2.	*22.67	13
d-	• Dealing with the rescuers.	£3	37.09	6	7.41	32	39.01	101	62.1£	*23.7£	23
e-	• Other.	2.	2£.69	£7	08.12	1£	12.28	106	6£.2.	*22.89	13
6	Lack of periodical maintenance of equipments and machines of the swimming pool.	37	45.68	14	17.28	30	37.04	155	63.79	*10.30	17
7	The pool's capacity exceeds the volume of activities used in it.	24	29.63	39	£8.10	18	22.22	106	6£.2.	*8.17	13
8	Lack of sufficient knowledge of maintenance systems and methods.	37	£0.68	1£	12.28	3.	37.0£	100	63.79	*1.3.	17

Follow Table (8)
Repetition, percentage, (ca2) value and phrases order of the study
sample responses to the axis phrases “reasons of crises occurrence
in swimming pools” N= 81

No.	Phrases	Agree		To some extent		disagree		Estimated total	Relative weight	Ca2	order
		repetition	%	Repetition	%	repetition	%				
9	Not following the scientific method of water sterilization inside the swimming pool.	41	50.62	6	7.41	34	41.98	100	63.79	*20.41	17
10	Lack of first aid official on the swimming pool.	34	41.98	13	16.10	34	41.98	162	66.77	*10.89	8
11	Using the swimming pool by many people in the same time.	26	32.10	49	60.49	6	7.41	142	58.44	*34.30	28
12	Lack of permanent security guards on the swimming pool to ban harassments or any struggles that may happen.	22	27.16	18	22.22	41	50.62	181	74.49	*11.19	2
13	Taking long time to do maintenance works without another alternative or a definite time to finish these works.	24	29.63	18	22.22	39	48.15	177	72.84	*8.67	4

Ca2 table value at morale level (0.05) and freedom degree (2) = (5.991)

Table (8) shows that (Ca2) calculated value of study sample responses to axis phrases “reasons of crises occurrence in swimming pools” were all statistically significant at morale level (0.05), except the phrase number (5- b) where the (Ca2) calculated value was (3.63) which is statistically insignificant. As (Ca2) calculated value was between (34.30 - 8.07), and the relative

percentage was between (78.60% - 58.44%), as the phrases numbered (1A, 1B, 2A, 2B, 3A, 4c, 5 D) came with high agreement percentage between (50.62% - 55.56%).

The researcher’s study assured the lack of coordination between the swimming pool administration and the athletic activity administration by percentage (09.53%), this contradicts with the study of (Mahmoud Abu Samra, Mohamed Eltity, and

Faten Ashour 2012) (10) where they have an open communication system between the department administration, the students and the crises team during the crisis; as coordination and communication are necessary to solve the crises and lack of both of them or even their moderate existence is one of the reasons of crises occurrence in swimming pools. The researcher also sees that one of the reasons behind the crises occurrence is the lack of sufficient qualifying of maintenance and rescue workers in particular, as half of the study sample confirmed that by (50.62%), also during

the researcher's meetings with a number of rescue guards, she found lack of satisfaction from their side concerns their salaries, long rescue hours and the inequality between them and the coaches in training courses, or the salaries which result in the occurrence of a crisis; this agrees with the study of (Mohamed Hanafy Soudi) 2006 (9). The administration sees the necessity of scientific qualification of coaches by (53.09%) of study sample.

6- Results display of study sample responses to the axis phrases “avoiding crises in swimming pools”.

**Table (9)
Repetition, percentage, Ca2 value, and phrases order of study sample responses to axis phrases “avoiding crises in swimming pools” (N=81)**

No.	Phrases	agree		To some extent		Disagree		Estimated total	Relative weight	Ca2	order
		repetition	%	repetition	%	Repetition	%				
There is an instructions and guidance booklet of the swimming pool for the following:											
a-	*employees.	٢٨	٣٤,٥٧	٢٨	٣٤,٥٧	٢٠	٢٠,٨٦	١٦٠	٦٧,٩٠	٠,٢٢	٣١
b-	*coaches.	٥٣	٦٥,٤٣	٢١	٢٥,٩٣	٧	٨,٦٤	٢٠٨	٨٥,٦٠	*٤١,١٩	١٨
c-	*rescuers.	٦٤	٧٩,٠١	٩	١١,١١	٨	٩,٨٨	٢١٨	٨٩,٧١	*٧٦,٠٧	٨
d-	*Members.	٥٦	٦٩,١٤	١٦	١٩,٧٥	٩	١١,١١	٢٠٩	٨٦,٠١	*٤٧,٦٣	١٦
e-	*audience.	٣٢	٣٩,٥١	٣٩	٤٨,١٥	١٠	١٢,٣٥	١٨٤	٧٥,٧٢	*١٦,٩٦	٢٦
The existence of clear definition of responsibilities and specializations of all the employees in the swimming pool.											
a-	*swimming pool director.	٦٩	٨٥,١٩	٧	٨,٦٤	٥	٦,١٧	٢٢٦	٩٣,٠٠	*٩٨,٠٧	١
b-	*deputy director.	٦٧	٨٢,٢٢	٦	٧,٤١	٨	٩,٨٨	٢٢١	٩٠,٩٥	*٨٨,٩٦	٦
c-	*coaches.	٦٥	٨٠,٢٥	٧	٨,٦٤	٩	١١,١١	٢١٨	٨٩,٧١	*٨٠,٣٠	٨
d-	*rescuers.	٦٤	٧٩,٠١	١٢	١٤,٨١	٥	٦,١٧	٢٢١	٩٠,٩٥	*٧٦,٩٦	٦
e-	*workers.	٤٦	٥٦,٧٩	٢٩	٣٥,٨٠	٦	٧,٤١	٢٠٢	٨٣,١٣	*٢٩,٨٥	٢١
The swimming pool administration hold training courses of crisis management:											
a-	*periodical.	٦٨	٨٣,٩٥	6	٧,٤١	٧	٨,٦٤	٢٢٣	٩١,٧٧	*٩٣,٤١	٤
b-	*infrequently.	٢٤	٢٩,٦٣	26	٣٢,١٠	٣١	٣٨,٢٧	١٥٥	٦٣,٧٩	٠,٩٦	٣٢

Follow Table (9)
Repetition, percentage, Ca2 value, and phrases order of study
sample responses to axis phrases “avoiding crises in swimming
pools” (N=81)

No.	Phrases	agree		To some extent		disagree		Estimated total	Relative weight	Ca2	order
		repetition	%	repetition	%	Repetition	%				
C-	*no courses.	30	37.04	8	9.88	23	28.49	129	11.22	*23.19	33

In the swimming pool there are pre-made models of the possible crises and how to deal with them and related to:

a-	*water	10	12.50	13	16.25	8	9.88	212	18.87	*10.96	
b-	*equipments and machines.	00	0.00	17	20.99	9	11.11	208	18.76	*22.54	11
c-	*official tournaments.	23	28.40	03	3.66	0	0.00	180	16.22	*23.06	18
d-	*friendly matches.	22	27.16	29	35.80	10	12.35	174	15.88	*29.06	27
e-	*rescuers.	11	13.58	12	14.81	1	1.23	217	19.72	*10.21	29
f-	*visitors.	20	24.69	03	3.66	8	9.88	174	15.88	*20.22	10
g-	*conflicting schedules of teams.	07	8.64	12	14.81	10	12.35	209	18.99		29
h-	*other	21	25.93	27	33.33	8	9.88	180	16.22		11

There an experienced official to deal with the crisis, such as:

a-	*delegated from board of directors.	59	72.84	15	18.52	7	8.64	214	19.44	58.07	11
b-	*senior coaches.	47	58.02	26	32.10	8	9.88	201	18.44	28.22	22
c-	*senior technician.	57	70.37	15	18.52	9	11.11	210	19.22	50.67	15
d-	*security officer.	32	39.51	41	50.62	8	9.88	186	17.11	21.56	24

The administration's attention to urging the employees to obtain educational courses about crises and how to deal with them:

a-	*pool director.	17	20.99	9	11.11	0	0.00	222	20.00	*19.19	2
b-	*coaches.	18	22.22	7	8.64	1	1.23	222	20.00	*22.22	2
c-	*technicians.	07	8.64	17	20.99	7	8.64	212	19.44	*07.80	13
d-	*workers.	31	38.27	22	27.32	8	9.88	180	16.22	*22.20	20

**Follow Table (9)
 Repetition, percentage, Ca2 value, and phrases order of study
 sample responses to axis phrases “avoiding crises in swimming
 pools” (N=81)**

No.	Phrases	agree		To some extent		disagree		Estimated total	Relative weight	Ca2	order
		repetition	%	repetition	%	Repetition	%				
C-	*no courses.	30	37.04	8	9.88	43	53.09	149	11.34	*23.19	33
	There are modern communication means of crises management.	43	53.09	29	35.80	9	11.11	196	15.36	*21.73	23
8	In the pool administration, there are files about the past crises to make use of them.	51	62.96	20	24.86	0	0	208	16.30	*39.41	18
9	The administration makes a daily report about the ratios of chlorine and ph.		82.22	8	9.88	6	7.41	223	17.57	*88.96	4
10	The swimming pool administration makes a pre-scenario of crises management.		70.37	16	19.75	8	9.88	211	16.63	*51.19	14

(Ca2) table value at morale level (0.05) and freedom degree (2) = (5.991)

Table (9) shows that phrases “avoiding crises in (Ca2) calculated value of study swimming pools” are all sample responses to axis statistically significant at

morale level (0.05), except the two phrases numbered (1 A) and (3 -b) where (Ca2) calculated value of them were (0.22, 0.96) respectively, which are statistically insignificant value.

As (Ca2) value was between (16.96 – 98.07), and the relative weight was between (61.32 – 93.00%). Where the phrases numbered (1c, 2a, 2b, 2c, 3a, 4a, 4h, 4f, 5a, 5b, 6a, 6b, 6c, 9, 10) came with high agreement percentage between (70.37% : 85.19%).

The researcher's study assured that there is a clear definition of responsibilities and specializations of workers; as the phase (2a) occupied the first place by (85.19%) of the complex director and 82.72% of his deputy, this agrees with the study of (Sabria Bint Muslim Alyehyay 2006) (5), that the most of the crises management operations are represented in the leadership, as for (Dolan, T, 2006) (14); he referred to the importance of having a crises team in which each person knows what he should do when a crisis occurs, and this is what phrase number (2) confirmed.

The administration also makes periodical courses which is confirmed by phrase (3a) by (83.95%) which confirms that the administration is keen on these courses and its importance and it urges workers to join educational courses about crises and how to deal with them; which phrase (6a, or 6b) assured; as it occupied the second place. This contradicts with the results concluded by (Mahmoud Abu Samra, Mohamed Eltity, and Faten Ashour 2012) (10) as they had moderate results on educational programs and courses and guidance in crises for faculties and universities. The researcher sees that there is no pre-made model for the possible crises and how to deal with them especially in official championships and friendly matches, this contradicts with **(Adams,Ch. Kritsons,W. 2006) (13)**; because their study assured that there is no strategic plan to crisis management which contradicts with the results the researcher concluded through the positive axis of avoiding crisis. While (Abdel Hadi Aly Ahmed Excell 2003) (6) agrees with her, about the how far the clubs

are prepared to athletic crises which include the plan, organization and training, which phrases number (5a, 5b, and 5c) confirmed that there is an experienced official to deal with the crisis and he has the authorization from board of administration by (72.84%) in addition to the senior coach and the senior technician; which is an integrated team work to face crises which

agrees with the study of (Vogelaar, 2005)(17).

The necessity to have a team work to face crises authorized by the higher administration and enjoys the power to take decisions if necessary.

7- Displaying the results of study sample responses to the phrases of axis “the scientific method of crisis management in swimming pools”.

**Table (10)
Repetition, percentage, Ca2 value, and phrases order of study sample responses to axis phrases “the scientific method of crisis management in swimming pools” (N=81)**

No.	phrases	agree		To some extent		disagree		Estimated total	Relative weight	Ca2	order
		repetition	%	repetition	%	repetition	%				
1	The swimming pool administration has the delegation of authority style in case of director's absence.	74	79.01	10	11.30	7	8.74	219	9.12	*77.22	7
2-	In the swimming pool administration, there are cadres have the ability to face athletic crises inside the swimming	77	82.72	6	7.41	8	9.88	221	9.90	*88.96	2

complex.										
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Follow Table (10)
Repetition, percentage, Ca2 value, and phrases order of study
sample responses to axis phrases “the scientific method of crisis
management in swimming pools” (N=81)

No.	phrases	agree		To some extent		disagree		Estimated total	Relative weight	Ca2	order
		repetition	%	repetition	%	repetition	%				
3	There are study and analysis of all the conditions that may be resulted from the crisis and preparation for it.	08	71,70	14	17,28	9	11,11	211	81,83	*03,80	17
4	In the swimming pool administration, there are modern technological means of managing sudden crises.	08	71,70	18	22,22	0	7,17	210	88,48	*03,02	12
5	There are files for all the crises related to the swimming pool.	04	66,67	21	20,93	7	7,41	210	87,42	*44,77	18
6	There is a scientific method to analyze information and facts related to the crisis.	01	62,96	23	28,40	7	8,74	206	84,77	*37,74	20

Follow Table (10)
Repetition, percentage, Ca2 value, and phrases order of study
sample responses to axis phrases “the scientific method of crisis
management in swimming pools” (N=81)

No.	phrases	agree		To some extent		disagree		Estimated total	Relative weight	Ca2	order
		repetition	%	repetition	%	repetition	%				

7- there are reports that may be returned to about the swimming pool in concerning:

a-	*maintenance rates.	٦٦	٨١,٤٨	٧	٨,٦٤	٨	٩,٨٨	٢٢٠	٩٠,٥٣	*٨٤,٥٢	٤
b-	*chlorine ratio in water.	٦٤	٧٩,٠١	٨	٩,٨٨	٩	١١,١١	٢١٧	٨٩,٣٠	*٧٦,٠٧	١٠
c-	Some members' riots.	٢٧	٣٣,٣٣	٤٩	٦٠,٤٩	٥	٦,١٧	١٨٤	٧٥,٧٢	*٣٥,٨٥	٢٤
d-	The continuous absence of coach or rescuer.	٦٥	٨٠,٧٥	١٠	١٢,٣٥	٦	٧,٤١	٢٢١	٩٠,٩٥	*٨٠,٥٢	٢
e-	The continuous complaints from some employees or coaches.	٥١	٦٢,٩٦	٢٤	٢٩,٦٣	٦	٧,٤١	٢٠٧	٨٥,١٩	*٣٨,٠٠	١٩

8- There are pre-made scenarios in the pool administration to deal with the crises related to:

a-	*equipments and machines.	٦٣	٧٧,٧٨	١٢	١٤,٨١	٦	٧,٤١	٢١٩	٩٠,١٢	*٧٢,٦٧	٧
b-	*members.	٤١	٥٠,٦٢	٣٣	٤٠,٧٤	٧	٨,٦٤	١٩٦	٨٠,٦٦	*٢٣,٤١	٢١
C	*coaches.	٦١	٧٥,٣١	١٢	١٤,٨١	٨	٩,٨٨	٢١٥	٨٨,٤٨	*٦٤,٥٢	١٢
D	*employees.	٣٨	٤٦,٩١	٣٤	٤١,٩٨	٩	١١,١١	١٩١	٧٨,٦٠	*١٨,٣٠	٢٣
E	*rescuers.	٥٥	٦٧,٩٠	٢١	٢٥,٩٣	٥	٦,١٧	٢١٢	٨٧,٢٤	*٤٨,٣٠	١٦
F	*other.	٤٠	٤٩,٣٨	٣٥	٤٣,٢١	٦	٧,٤١	١٩٦	٨٠,٦٦	*٢٤,٩٦	٢١

9-when a crisis occurs in the swimming pool, it is dealt with using:

A	*admitting the existence of the crisis.	٦٥	٨٠,٧٥	٩	١١,١١	٧	٨,٦٤	٢٢٠	٩٠,٥٣	*٨٠,٣٠	٤
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**Follow Table (10)
 Repetition, percentage, Ca2 value, and phrases order of study
 sample responses to axis phrases “the scientific method of crisis
 management in swimming pools” (N=81)**

No.	phrases	agree		To some extent		disagree		Estimated total	Relative weight	Ca2	order
		repetition	%	repetition	%	repetition	%				
B	*determining crisis reasons.	٦٤	٧٩.٠١	٩	١١.١١	٨	٩.٨٨	٢١٨	٨٩.٧١	*٧٦.٠٧	٩
C	*determining who is responsible for the crisis occurrence.	٦٢	٧٦.٥٤	١٠	١٢.٣٥	٩	١١.١١	٢١٥	٨٨.٤٨	*٦٨.٠٧	١٢
D	*quickly solving the crisis.	٦٩	٨٥.١٩	٧	٨.٦٤	٥	٦.١٧	٢٢٦	٩٣.٠٠	*٩٨.٠٧	١
E	*ignoring the crisis.	٣٢	٣٩.٥١	٦	٧.٤١	٤٣	٥٣.٠٩	١٥١	٦٢.١٤	*٢٦.٧٤	٢٥

10-when a crisis occurs, you make use of experts to solve it:

A	*maintenance companies (in case of crisis related to equipments).	٦٤	٧٩.٠١	١١	١٣.٥٨	٦	٧.٤١	٢٢٠	٩٠.٥٣	*٧٦.٥٢	٤
B	*members of board directors (in case of crisis related to members).	٦٢	٧٦.٥٤	١٢	١٤.٨١	٧	٨.٦٤	٢١٧	٨٩.٣٠	*٦٨.٥٢	١٠
c	*members of Game Federation (in case of crisis related to clubs).	٦٠	٧٤.٠٧	١٣	١٦.٠٥	٨	٩.٨٨	٢١٤	٨٨.٠٧	*٦٠.٩٦	١٥

(Ca2) table value at morale level (0.05) and freedom degree (2) = (5.991)

Table (10) shows that statistically significant at (Ca2) calculated value of study morale level (0.05).

sample responses to axis phrases “the scientific method of crisis management in swimming pools” are all As (Ca2) value was between (18.30 – 98.07), and the relative weight was between (75.72% - 93.00%);

where the phrases number (1, 2, 3, 4, 7a, 7b, 7d, 8a, 8c, 9a, 9b, 9c, 9d, 10a, 10b, and 10c) came with high agreement percentage between (71.60% : 85.19).

From what is mentioned previously, it is clear that the high agreement percentage which confirms that swimming complexes use the scientific method of crisis management, as the swimming pool administration enjoys the style of delegation of authority in case of the director's absence which should be prepared and trained on before. This is due to the existence of cadres that have the ability of confrontation; which was confirmed by phrase number (2) by (82.72%) that occupied the second place in the axis for its importance and positivity. This is sustained by the modern technological means used by the administration in solving crises; which was confirmed by phrase number (4) by (71.60%). Also, there is a followed style and steps when the crisis occurs; we find phrases number (9a, 9b, 9c, 9d) when a crisis occurs, we must admit its occurrence, determine its reasons and who is responsible for it and to

quickly solve it. In addition, the complex administration has the cadres that enjoy the ability to face crises; this phrase occupied the second place by (82.72%). This agrees with the study of **(Edert, R and Griffin, R. 2005) (15)** in ways of crisis management, also when the crisis occurs, we should use the specialized experts in the crisis kind; this was confirmed by phrases (10a, 10b, 10c) which agrees with the study of (Mohamed Elserafy 2005) (8) the methodological administration in dealing with crises in light of preparation, knowledge, understanding and the available potentials, the skills and the prevailing patterns of administration. It also has pre-made scenarios to deal with these crises. But the researcher sees that the pre-made scenario to deal with the members occupies the 21st place by (50.62%) which is a tiny percentage for a number of members and the difference in cultural & knowledge level of crises management in swimming pools, the axis in general depends on the scientific method of crises management and this disagrees with the study of Sbria Bin

Muslim Alyehewy (2006) (5) that concluded that most of crises management operations are concentrated on the higher leadership and not distributed.

9- Displaying the study sample responses to the phrases of axis “evaluation method of administration performance in swimming pools”.

Table (11)

Repetition, percentage, Ca2 value, and phrases order of study sample responses to axis phrases “evaluation method of administration performance in swimming pools” (N=81)

No.	Phrases	agree		To some extent		disagree		Estimated total	Relative weight	Ca2	order
		repetition	%	repetition	%	repetition	%				
1	There are periodical and official records about the swimming pool accredited by club director and board of directors about the pool activity.	٥٣	٦٥,٤٣	١٩	٢٣,٤٦	٩	١١,١١	٢٠٦	٨٤,٧٧	*٣٩,٤١	٢١
2	There are annual reports about the crises that occurred in the swimming pool.	٦٠	٧٤,٠٧	١٦	١٩,٧٥	٥	٦,١٧	٢١٧	٨٩,٣٠	*٦٢,٧٤	٨
3	There are daily reports about the ratio of chemicals used in the swimming pool.	٥١	٦٢,٩٦	٢٤	٢٩,٦٣	٦	٧,٤١	٢٠٧	٨٥,١٩	*٣٨,٠٠	٢٠
4	There are a map	٦١	٧٥,٣١	١٣	١٦,٠٥	٧	٨,٦٤	٢١٦	٨٨,٨٩	*٦٤,٨٩	١٠

clarifies the rescue points that must be covered.											
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Follow Table (11)
Repetition, percentage, Ca2 value, and phrases order of study
sample responses to axis phrases “evaluation method of
administration performance in swimming pools” (N=81)

No.	Phrases	agree		To some extent		disagree		Estimated total	Relative weight	Ca2	order
		repetition	%	repetition	%	repetition	%				
5	There are steps to be followed to treat crises in the swimming pool.	51	62.96	22	27.16	8	9.88	200	84.36	*30.63	22
6	There is a map clarifies the performance schedules of athletic teams.	62	76.04	10	12.30	9	11.11	210	88.48	*78.07	12
7	To have ways to punish the responsible for the crisis occurrence.	60	74.07	16	19.70	0	0.00	217	89.30	*72.74	8
8	To have ways to reward who helped to end the crisis.	43	53.09	32	39.01	6	7.41	199	81.89	*26.74	23

9—there are forms for the continuous evaluation of performance in the swimming pool that covers all the employees in it:

A	*pool director.	٦٩	٨٥,١٩	٦	٧,٤١	٦	٧,٤١	٢٢٥	٩٢,٥٩	*٩٨,٠٠	١
B	*deputy director.	٦٦	٨١,٤٨	٨	٩,٨٨	٧	٨,٦٤	٢٢١	٩٠,٩٥	*٨٤,٥٢	٥
C	*employees.	٣٢	٣٩,٥١	٤٣	٥٣,٠٩	٦	٧,٤١	١٨٨	٧٧,٣٧	*٢٦,٧٤	٢٥
D	*coaches.	٦١	٧٥,٣١	١٢	١٤,٨١	٨	٩,٨٨	٢١٥	٨٨,٤٨	*٦٤,٥٢	١٢
E	*rescuers.	٥٩	٧٢,٨٤	١٣	١٦,٠٥	٩	١١,١١	٢١٢	٨٧,٢٤	*٥٧,١٩	١٧
F	*other.	٣٢	٣٩,٥١	٤٤	٥٤,٣٢	٥	٦,١٧	١٨٩	٧٧,٧٨	*٢٩,٥٦	٢٤

Follow Table (11)
Repetition, percentage, Ca2 value, and phrases order of study
sample responses to axis phrases “evaluation method of
administration performance in swimming pools” (N=81)

No.	Phrases	agree		To some extent		disagree		Estimated total	Relative weight	Ca2	order
		repetition	%	repetition	%	repetition	%				
10—there is a scientific method to evaluate the employees' performance in the swimming pool:											
A	*pool director.	٦٨	٨٣,٩٥	٧	٨,٦٤	٦	٧,٤١	٢٢٤	٩٢,١٨	*٩٣,٤١	٣
B	*deputy director.	٦٣	٧٧,٧٨	١٢	١٤,٨١	٦	٧,٤١	٢١٩	٩٠,١٢	*٧٢,٦٧	٧
C	*employees of systems.	٦١	٧٥,٣١	١٣	١٦,٠٥	٧	٨,٦٤	٢١٦	٨٨,٨٩	*٦٤,٨٩	١٠
D	*rescuers.	٥٥	٦٧,٩٠	١٨	٢٢,٢٢	٨	٩,٨٨	٢٠٩	٨٦,٠١	*٤٥,٤١	١٨
E	*coaches.	٦٨	٨٣,٩٥	٧	٨,٦٤	٦	٧,٤١	٢٢٤	٩٢,١٨	*٩٣,٤١	٣
11—there are a scientific method to measure the crisis management operation:											
A	*crisis nature.	٦٥	٨٠,٢٥	١١	١٣,٥٨	٥	٦,١٧	٢٢٢	٩١,٣٦	*٨٠,٨٩	٤
B	*time of occurrence.	٦٥	٨٠,٢٥	١٠	١٢,٣٥	٦	٧,٤١	٢٢١	٩٠,٩٥	*٨٠,٥٢	٥
C	*its persons.	٥٨	٧١,٦٠	١٦	١٩,٧٥	٧	٨,٦٤	٢١٣	٨٧,٦٥	*٥٤,٨٩	١٦
D	*factors resulted from it.	٦١	٧٥,٣١	١٢	١٤,٨١	٨	٩,٨٨	٢١٥	٨٨,٤٨	*٦٤,٥٢	١٢
E	*crisis result.	٦١	٧٥,٣١	١١	١٣,٥٨	٩	١١,١١	٢١٤	٨٨,٠٧	*٦٤,٣٠	١٥
F	*the decision about it.	٦٨	٨٣,٩٥	٨	٩,٨٨	٥	٦,١٧	٢٢٥	٩٢,٥٩	*٩٣,٥٦	١

Ca2) table value at morale level (0.05) and freedom degree (2) = (5.991)

Table (11) shows that (Ca2) calculated value of study sample responses to axis phrases “**evaluation method of administration performance in swimming pools**” are all statistically significant at morale level (0.05).

(Ca2) value was between (26.74 – 98.00), and the relative weight was between (77.37% - 92.59%), where the phrases number (2,4, 6, 7, 9a, 9b, 9d, 9h, 10a, 10b, 10c, 11a, 11b, 11c, 11d, 11h, 11y) came with high agreement percentage between (71.60% - 85.19%).

The study made by the researcher confirmed that the axis of evaluation method of administration performance is a result of the axis of scientific method of crises management, as the all axis’ phrases were positive and of high percentage whereas there are annual reports about the crises that occurred in the swimming pool, and the agreement percentage on phrase number (2) was (74.07%) and it occupies the eighth place for its importance in analyzing the problem and knowing its reasons, which agrees with the study of (Abdel Hadi Aly

Ahmed Excell 2003) (6) their expectations of crisis repetition, the time of its occurrence and how far they are prepared for it. Also, the existence of a map that shows the rescue points and performance times of athletic teams which facilitates evaluating the administration performance during the crisis, this was clarified by phrases number (4, and 6) by percentage (75.31% , 76.54%). Moreover, there is firmness when the crisis occurs, as this phrase obtained high agreement percentage (74.07%). What emphasizes that the swimming complexes follow modern evaluation methods to evaluate administration performance is that they have performance evaluation form continuously for all the employees (director, deputy director, coaches, workers and rescuers) that enjoy high percentage between (75.31% - 85.19%). They also have scientific methods and techniques for evaluation, which all the axis phrases confirmed; phrases number (11a, 11b, 11c, 11d, 11h, 11y) agree with the study of (Kelsay, L. 2007) (16) that the crisis’ nature, timing and

persons affect measuring crisis management operation, and consequently, affect the consequential results and decisions as phrase number (11y) obtained high percentage (83.95%) which indicates that decision is the most important step in the operation of crisis management measuring. That disagrees with the study of (Sherif Mohamed Awad 2007) (4) that decision makers are the high and medium categories, while (Dolan. 2006) (14) sees the importance of having a team group in time of crises where every person knows what he should do in time of crisis occurrence. The researcher sees that decision making is influenced by continuous change, intervention, impulse and complication, so the research praises and recommends teams of crises management for its experience and knowledge of crises management, its solution, and taking decision without reference to high categories as it is a waste of time.

Research conclusions:

In light of research questions and the statistical procedures, the researcher concluded the following:

First: reasons of crises occurrence in swimming pools:

- Lack of coordination between the swimming pool administration and the technical systems.
- Lack of coordination between the swimming pool administration and the athletic activity administration.
- Lack of sufficient scientific qualification of maintenance workers in swimming pool.
- Lack of scientific qualification of rescue in swimming pool.
- Lack of alternative plans to use them when rescuers are absent.
- Lack of regulations to deal with rescuers.
- Not following the scientific method of water sterilization systems inside the pool.

Second: Avoiding crises in swimming pool complexes:

- The existence of clear definition of responsibilities and specializations of all the employees in the swimming pool (director – deputy director – coaches – rescuers).
- The swimming pool administration should make

training courses of crises management periodically.

- To have a clear definition of responsibilities and specializations of all the employees in the complex.

- The administration must urge the employees to have educational courses about crises and how to deal with them.

- To have a booklet of instructions and guidance for rescuers on the swimming pool.

Third: the scientific method of crises management in swimming pools:

- The administration should had the style of delegation of authority when the director absence from the swimming complex.

- The administration should have cadres that enjoy the ability of facing athletic crises inside the swimming complex.

- To have reports about maintenance rates and chlorine ratios in water to be referred to.

- To have reports about coaches and rescuers absence this helps in accountability when the crisis occurs.

- To deal with the crisis using the method of (acknowledgment –

- determining reasons – determining who is responsible – quickly solving it).

- To make use of experts in order to solve the crisis when it occurs.

Fourth: evaluation methods of administration performance in swimming pools:

- To have annual reports about the crises that occurred.

- To have a map that shows rescue points which have to be covered and the timing of teams' performance on the swimming pool.

- To have method of punishing the careless people when a crisis occurs.

- To have a scientific method for continuous evaluation of the employees' performance.

- To use the scientific method in measuring the crisis management concerning (crisis' nature – time of its occurrence – its persons – the consequential factors – crisis result – and the decision taken about it).

Recommendation:

- 1- To use the questionnaire made by the researcher to measure the level of crises management in swimming pools.

2- To make similar studies on clubs in different governorates in order to recognize the scientific method of crises management.

3- To perform similar studies on clubs of low financial level in order to recognize the level of scientific method of crises management.

4- To make a study comparing between clubs of high financial resources (elite clubs) and those of low financial resources in order to recognize the aspects of agreement and disagreement among them in the scientific method of crises management.

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