

The Effectiveness of a Safe Education Program on the Development of Careful Behaviour in Kindergarten

Murooj Adel Khalaf^a, Marwa Mahdi Kazem^{b, a,b}University of Almustansiria,
College of Basic Education, Department of Kindergarten.

The current research aims to identify the effectiveness of an educational program based on safe education in developing cautious behaviour in kindergarten children. The study sample consisted of 60 children consisting of girls aged 5-6 years. The sample was divided into two groups: an experimental group consisting of 30 girls, and a control group consisting of 30 girls. In order to verify the research objective, the researcher constructed the measure of cautious behaviour, and the experimental, semi-experimental experimental design was used for the post-tribal tests. The standard is from 30 paragraphs in the final form to the alternatives of answers (2 = never applies, 1 = sometimes applies, 0 = always applies). To achieve the research objective, 30 lessons in addition to the introductory and final classes were given. Each lesson took 30 minutes. After the data was processed statistically, the research results identified the experimental group had more cautious behaviour than the control group. Based on the results, A set of conclusions, recommendations and suggestions (based on the results) are presented. Keywords: Effectiveness, Safe Education or Child Health Security, Development, Behaviour, Caution, Preventive Awareness, Immunisation, Kindergarten Children.

Key words: *Educational Program, Careful Behaviour, Kindergarten, Effectiveness, The development*

Introduction

Childhood is one of the most important stages of human life because it is the stage in which all dimensions of a person's behaviour, habits, and attitudes towards themselves, others and the environment are determined. Consequently everything should be put in place to help the child to properly grow and prepare for the future (Obeidi, 2005). There is an interest in providing the right environment and detecting the dangers and accidents that the kindergarten child is

exposed to. Children in their early developmental stages have enormous abilities and energies that drive and guide them permanently to discover what surrounds them, and to interact with everything in their environment. They are therefore exposed to many dangers on a daily basis. With limited life experience, they are vulnerable, often defenceless and unable to react properly to danger (Al-Zubaidi, 2016; Boutros, 2010; Dawood et al., 1990). The author considers it is necessary to give the kindergarten child awareness of the concepts of safe education and associated behaviours to help avoid potential risks at kindergarten, within the broader community and the home. Reducing the incidence of risks among children through real learning makes the child active and more effective in an educational situation to gain safe experiences and help them avoid potential danger.

Thus, the current research problem crystallised with the following question:

What is the effectiveness of an educational program based on safe education in wishing the kindergarten behaviour of the kindergarten child (Akram, 2003); Al-Janabi, 2015; Al-Rashdan, 2005; Al-Rousan & Haroun, 2001; Ikram, 2011; , Mohamed, 2001).

The importance of research: The care of the child provides an opportunity to develop its capabilities. It is no longer just a personal matter, or discretionary in its application. In contemporary society childcare and education has become a discipline in its own right interested in studying the knowledge, mental, motor and physical experience of the child in all its aspects. This is because the child is the first building block in the social and health educational construction of any society (Al-Arabi, 1999). Safe education is an educational process aimed at providing the learner with the necessary expertise and skills to maintain his or her personal safety and the safety of others. Through training and experiencing certain situations that can be recognised children can learn to exercise cautious behaviour, make appropriate and reliable decisions quickly to avoid or reduce the amount of damage and loss associated with exposure to danger (Abdul Azim, 2009; Al-Saras, 1996; Hassan, 2005; Saadeh, 2010; Zaytoun, H.& Zaytoun, K. 2003; Zaytoun, 2003)

Consequently, safe education should be included as an integral part of the kindergarten curriculum . This should include a set of practices and activities to be carried out by children that enable them to assess the risks and maintain safety for themselves and others. It will also help in their acceptance of the advice that contains safe information from others. When a child is used to practicing safe behaviours continuously, these behaviours become an integral part of his or her daily practice (Allagany and El Gamal, 1999; Allagany and Gamal, 2003; Anani, 2002; Madani, 2014).

Objectives and hypotheses of the research: - The current research aims to know the effectiveness of an educational program based on safe education in the development of caution behaviour in kindergarten children (Abdel Azim, 2009).

To achieve the research objective, the researcher has set the following hypotheses and objective:

- 1 - There are no statistically significant differences between the mean scores (on the cautious behaviour scale) of the experimental group children behaviour in the pre and post-test periods (i.e. before and after application of the educational program) (Anastasi, 2010).
- 2 - There are no statistically significant differences between the mean scores (on the cautious behaviour scale) of the experimental group and the the control group behaviour in the post-test period.
- 3 - There are no statistically significant differences between the mean scores of the experimental group (on the measure of cautious behaviour) in the post-test period according to the sex variable.
- 4 - Identify the effectiveness of an educational program based on safe education in the development of cautious behaviour in kindergarten children.

Search Limits: Current Search is Determined by:

- Human limits: Pre-school children in government kindergartens of both sexes (males - females) aged 5-6 years.
- Spatial limits: General Directorate of Education in Karbala / Karbala Governorate / Iraq.
- Temporal limits: school year during 2018-2019 period.
- Scientific limits: safe education - cautious behaviour.

Definition of terms: -

1 : Effectiveness: Shehata and El-Naggar (2003) defined Effectiveness as

The extent to which experimental treatment can have the effect of being an independent variable on a dependent variable. (Eble, 2017; Ebel & Frisbie, 2009; Jane, 1997; John, 1998; Karen & Paul, 2000; Shehata & El-Naggar, 2003).

2 : Safe Education:

“It is a process that is not intended to disseminate information as much as it is to change attitudes through planned learning activities (Krahwohl, 1997; Lakani & Camel, 2003).



3 : Development:

Al – Sayyed (2005) defined Development as

"It is the development and improvement of an individual's performance and enables him to master all skills on a regular basis" (Al-Sayyed, 2005).

4 : Cautious behavior known:

This is a behaviour characterised by awareness, attention and careful, non - impulsive qualities that are required to be imprinted in the child in the early stages of development until it becomes part of his / her behaviour and up to the level of equity, which is the summit of the summit stages (Kratwohl, 1997).

5 : Procedural definition of the researcher for the term cautious behaviour: This represents the final measure obtained by the child on the cautious behaviour scale.

6 : Kindergarten children defined by the Ministry of Education (2005):

A child who was accepted in kindergartens being at least four years of age or who will complete Kindergarten by January 31, and not be older than six years of age (Ministry of Education, 2005; Miller & Austin, 2014).

Theoretical Framework and Previous Studies

1: The theoretical framework for safe education:

Safe Education

There has been increasing interest both in Iraq and globally in early childhood education and research. These disciplines stress the importance of this age and its seriousness to the formative life of the individual given their development characteristics and vulnerability. The varying developmental needs of children, especially in the early childhood (4 to 6) years and their desire to investigate, explore and understand their surroundings can mean many children may be exposed to risks they are unaware of and unable to avoid (Raqban, 2004). One of the most important characteristics of child development is in the stage of 4 - 6 years.

Common Incidents of Children in Kindergarten and Outside:

Falling and Impact

It is one of the most common incidents and many children are at risk of falling either from windows or stairs, or during climbing or descending from the ladder or if the shoelaces are not strapped which can cause them to fall and experience impact (Raqban, 2004 p.257).

Burns

Burns can be the cause of death of children and may be caused by fire, electricity or hot liquid contact. Children may be exposed to these hazards as a result of tampering with sulfur, playing with an electric iron or handling hot cooking utensils (Kojak et al., 1999).

Choking

One of the safe behaviours that should be is supervision and observation during play to ensure choking hazards are removed from play areas. Supervision during transit to and from home so as not to enter inappropriate spaces and inadvertently close doors on himself / herself. Training children on proper eating habits including not speaking while swallowing food and keeping plastic bags, wires and cords away from their hands are examples of choking risk minimisation (Raqban, 2004).

Chemical Poisoning

Poisoning incidents are considered a risk for children younger than six years. At risk children may be exposed to poisoning through inhalation of chemical products, or food poisoning through eating rotten or beyond use by date foods, or taking chemicals such as medicines, toiletries, detergents and / or pesticides.

Electricity

Electrocution can endanger human life, both adults and children. Children, however, are more vulnerable because they do not realise the extent of the risk i.e. that exposure to electric current may stop their breathing heart function and result in death. Managing exposure to electricity sources, and common household appliances and cabling and ensuring adult supervision at all times will mitigate electrocution risk.

Safe Education Objectives

The objectives of safe education have been categorised in two dimensions:

1. **Safe Education Individual:** This dimension focuses on the preparation of the individual professional to avoid many risks, accidents and damage expected to occur and correct associated behaviour pre-emptively.
- 2 **Safe Education Assembly:** This dimension is education that focuses on collective responsibility and includes all community members within a specific environment starting from home, kindergarten, street, neighbourhood etc.

Previous Studies of Safe Education: Arabic Studies

Study of SARS (1996) – A proposed program for the safety of preschool children from hazards inside and outside the home.

The study aimed to guide the child through situations of risk by real-life coexistence and direct interaction with other children and participation in group activities. The program applied to children aged 4 – 6 years in Sohag Governorate in Egypt. The research sampled 65 boys and 35 girls and used a one-group experimental approach. Although no control group was used there are statistically significant differences between the average scores of children (assessed on the cautious behaviour scale) before and after testing outside the home with their scores after education treatment being higher.

Civil Study (2014)

The study aimed to prepare a program for safe education in some areas of home economics and measure the impact on cognitive achievement and trends of third-grade preparatory pupils in Sohag Governorate, Egypt. This research fits the variables that may affect the experience viz sex, age, intelligence, economic, social and scientific literacy level, location of residence and natural factors related to it etc. The author utilised a questionnaire directed to teachers of home economics about the importance and type of suitable safety precautions. A cognitive achievement test aimed at identifying what the program can achieve from safety information and measured the attitudes of third-grade preparatory pupils towards security at home. Repeat sampling after program application identified that there are statistically significant differences between the average scores of pupils in favour of post-application improvements. Pupils were more conscious about safety regarding housing, tool and device handling and usage and general household and food safety (Mervat, 2014).



Shazli Study (2015) – Program to achieve safe education goals for kindergarten based on some active learning strategies.

This research aimed to develop the awareness of kindergarten children of safe education behaviours and achieve the objectives of different safe education in different scenarios (kindergarten, home and street risks together with the risks of dealing with strangers). Seventy children (boys and girls) were studied with the most important methods used being the method of Cronbach, T-test and factor analysis. The results showed statistically significant differences between the mean scores of the experimental group children in the pre and post education criterion. The current study used the experimental design of the experimental and control groups and followed the pre and post measurement of each group separately (Shazli, 2015).

Foreign Studies

Man Newton (1982) – Improving health and safety in the workplace.

The study aimed to make the students in the secondary stage aware of the problems of security and occupational health and help them form and build sound attitudes towards security. The sample size was 100 students and the study resulted in a plan to study the risks for specific professions and trends chosen by the students in the field of security and occupational health.

Audrey Clark (1986) – Can safety skills be taught to preschool children?

The study aimed to teach preschool children safety skills and how to protect themselves from dangers and accidents inside or outside the kindergarten. The research program applied to children aged 4 - 6 years and consisted of 30 lessons over two months. The size of the sample was 60 (boys and girls) and the results clearly showed that pre-schoolers understood the risks, how to prevent them and how to deal with the underlying causes of these risks (Clark, 1986).

Sylvester Study (1997) – Personal safety curriculum for pre-schoolers.

The study aimed to evaluate the teaching within the curriculum of personal safety for pre-school 4 - 6 years with a sample size of 65. Results showed a clear improvement in knowledge of safety skills for children after teaching the curriculum at each stage, together with competency in the use of safety skills.

The theoretical framework of cautious behaviour:

Behaviour Definition

Behaviour is defined as all actions and activities that are expressed by the child, whether visible or not. This includes acts that can be observed and measured (such as physiological and motor activities) or those that cannot such as thinking and remembering.

Behaviour is not static, but changes and does not occur in the vacuum, but in an interaction with the surrounding environment. It may occur involuntarily such as breathing or coughing or occur voluntarily and be intentional and conscious. This type of behaviour can be learned and influenced by environmental factors of the and the home environment. The term cautious behaviour is one of the educational terms that emerged clearly at the end of the 1990's (Tantawi, 1997). Training in the need for cautious behaviour (risks / injuries and accidents) and physical and psychological pain / responses builds resistance to pain. Programs on how to cope with graded injuries are educational for children. This approach is multifaceted in nature and is not flexible because of the complexity of confrontational situations and deceptions and because of individual and cultural differences between children (Patterson, 1990).

Theories That Explain Cautious Behaviour

1: The theory of Cogan and Walsh (1964) regarding caution:

This theory explained cautious behaviour and its relationship to mental ability in general and individual ability in particular, to learn cautious behaviour and how to use behaviourit to avoid manifesting risks.

- Type I

It is the pattern that represents the most cautious behaviour and is related to ability and in Type 1 cases, the health and level of performance of the child is the criterion for judging cautious behaviour.

- Type II

This pattern does not depend on the health of the child or their performance but cautious behaviour is seen as a constant factor.

- Type III

This pattern combines the characteristics of Types I and II and emphasises the relationship between cautious behaviour and ability on the one hand and the importance of developing cautious behaviour in early childhood and learning safe behaviours on the other.

The theory of Cogan and Walsh emphasised that there is a relationship between cautious behaviour and some other personality variables such as anxiety, motivation, independence, and flexibility.

How to measure caution behaviour as Kogan and Walsh did is in the selection of attitudes to individuals and how to deal with these attitudes on the basis of which level of caution is measured in individuals, especially in the child (Kogan & Wallach, 1964: p. 20-22).

2: The Theory of MISC (1984):

Samuel Misk presented his theory of cautious behaviour in the form of two specific perspectives: the first includes nine specific perceptions of cautious behaviour in its various expressions and the other involves trying to draw the lines between caution style and each of the cognitive controls and mental abilities.

Perspective 1: It includes the following seven scenarios:

1. Prudent behaviour relates to the characteristics of the cognitive system and thus cautious behaviour can determine differences between individuals due to characteristics of cognitive structure.
2. Cautious behaviour is a model of self-consistency in cognition, remembering, thinking and problem solving e.g. the cautious approach to dealing with strangers, which refers to individual differences in the extent of memory representation of stimuli.
3. Cautious behaviour is seen as cognitive details that express certain responses to different stimuli.
4. Caution is seen as comprising decision-making strategies (such as risk versus caution).
5. The precautionary approach is seen as patterns of cognitive controls that refer to mechanisms of individual adaptation to the environment.
6. The cautious approach is seen as organised individual patterns of capacity.

Perspective 2 :

Address cautious behaviour in terms of its location relative to controls and capabilities. Misk argues that cognitive controls are adopting cautious behaviour consistent with abilities. They often descend with cognitive methods as they indicate the extent of cognitive consistency in form and method.

Cognitive methods and controls also regulate and control multiple variables within individuals, whereas cognitive controls vary by being unipolar and directional in value, and are thus similar to capabilities.

The creative capabilities are seen by MISC as reflecting tendencies such as ability, typical performance or maximum performance, which is unipolar and determines the general or specific professional as well as being a directional value. Its value is not in the form of mastery or accuracy of performance or validity of response but more in the form of specific responses that suit particular stimuli and deal effectively with them. Examples of creative abilities are flexibility, originality, fluency and speed of response.

Previous studies

The researchers did not find previous studies on the cautious behaviour variable despite repeated attempts.

Research Methodology and Procedures

1: Methodology: To achieve the current research objective, the researchers used the experimental method.

2: Experimental Design: Since the aim of the current research is to identify the effectiveness of an educational program based on safe education in the development of caution behaviour in kindergarten children, the study used experimental design with pre and post-test for the experimental group and pre-test only for the control group.

3: The Research Community and Its Sample

1- The research community: The current research community consists of kindergarten children (preschool class) aged 5-6 years from both sexes who attend government kindergartens (3943) in the city of Karbala belonging to the Directorate General of Education of Karbala for the academic year (2018 -2019). Table 1 illustrates this.

Table 1: Number of Kindergartens and Children Registered in the Pre - Primary Stage by Sex Variable

Total	No. of Females	No. of Males	Number of Riyadh	Directorate General of Karbala Education
3943	1953	1990	24	Total

2- Research sample

A sample of cautious behaviour (Statistical Analysis Sample): The researcher selected a random sample of 200 kindergarten children from the Directorate General of Education in Karbala / Karbala governorate distributed across 10 kindergartens as presented in Table 2 below.

Table 2: Statistical analysis sample by sex variable

total	female	male	Kindergarten Name
20	10	10	Melodies
20	10	10	Rockerries
20	10	10	Jasmine
20	10	10	The flowers
20	10	10	Roses
20	10	10	Spur
20	10	10	Areej
20	10	10	Narcissus
20	10	10	Tulips
20	10	10	Sinbad
200	100	100	Total

B - The sample of the experiment: The experiment sample consisted of 60 students (boys and girls) in the preschool class assessed as having a low level of cautious behaviour (refer Table 3 below).

Table 3: Sample of Experience by Sex Variable

Total	Number of Kids/ Gender		Kindergarten Name
	Female	Male	
			Jasmine
147	81	66	Total

The researcher selected 30 students from the experimental group consisting of 15 boys and 15 girls, and 30 children from the control group 15 boys and 15 girls. Table 4 illustrates this.

Table 4: Experimental Study Sample by Sex Variable

Total	Female	Male	Treatment group
30	15	15	Experimental
30	15	15	Control
60	30	30	Total

The integrity of the experimental design: the researcher tried as much as possible to standardise the non-experimental variables that could affect the safety of the experiment such as: the internal integrity of the design (sample selection, experiment conditions and associated

accidents, physical conditions), external safety of the design, the interaction / influence of the independent variable with potential sample biases, the effect of multiple variables in independent variables and the effect of experimental procedures during this study.

Research Tools

1- Precautionary Behaviour Scale: In order to achieve the goal of the current research, a special scale was required to measure the extent of the development of caution skills in kindergarten children. The definition that "is a behaviour characterised by consciousness and attention and careful and non-impulse, which are required qualities rooted in the child in the early stages of development so that they become part of his behaviour and reach the limit of equity, which is the summit of the summit stages" (Krathwohl, 1997) was relied upon together with the literature to develop the scale used in this study.

2 - Preparation of textual information to assist the measurement of cautious behaviour: One of the important steps in the construction of the scale is to develop textual information / positions related to the phenomenon in question. Thirty summary paragraphs covering over five topics (refer Table 5) summarise this. The draft scale was reviewed with consideration to relative frequency of the topic and expert opinion by a group of arbitrators specialising in educational and psychological sciences and kindergartens. Following this review some information topics and the scale was modified.

Table 5: Areas of cautious behaviour and number of paragraphs

No. of items	Domain name	s
6	Risks in kindergarten	1
6	Dangers at home	2
6	Dangers on the street	3
6	Dangers of eating certain foods	4
6	The dangers of dealing with strangers	5

Preparation of Scale Instructions

The researcher took into account when preparing the scale instructions to be clear, concise easy to understand and apply and to give short, relevant responses. The importance of cooperation with the researcher and providing honest accurate responses was emphasised (Faraj, 2007). This was based on the need to verify the understanding of the target sample of instructions / information in terms of scale and clarity (Faraj, 1980).

Correct Behavioural Scale

Correcting the scale means getting the total score to answer the different textual content (paragraphs) of the measure of cautious behaviour by summing the scores obtained by the child for all paragraphs, and the scores for each paragraph distributed over the three alternatives to the scale (always apply, sometimes apply, never), and weights have been determined respectively (0,1,2) for paragraphs.

Logical Analysis of Paragraphs Measure Cautious Behaviour

It is related to the general appearance of the scale in terms of the type of paragraphs, the method of formulation and how clear and appropriate to the objectives of the research (Anwar, 1990).

Apparent honesty indicates whether the scale seems appropriate to measure what it was intended for i.e. that the measure contains paragraphs that are related to the variable or phenomenon measured and that these paragraphs are consistent with the purpose for which the scale was set (Anastas, 2010),

Apparent honesty is one of the indicators of honesty and the preferred method of verifying apparent honesty is when a number of experts determine the validity of the paragraphs to measure the quality of response for which they were developed (Garage, 1997).

Therefore, the researchers presented the scale with instructions in its initial form, consisting of 30 paragraphs to a group of experts and arbitrators in psychology and kindergartens to assess the apparent sincerity of the paragraphs on the scale and judge the following:

- A. The relevance of the theoretical definition of the current research variable.
- B. The suitability of the paragraph for the domain.
- C. Validity of alternatives.
- D. Necessary modifications (add, delete, merge, edit).
- E. Clarity of instructions.

Statistical Analysis of Paragraphs Measure Cautious Behaviour

The process of statistical analysis of paragraphs is an essential step in the construction of any scale in order to detect psychometric properties, which leads to the selection of paragraphs with good characteristics and exclude paragraphs that do not have such characteristics. Reliability and consistency in any scale depends heavily on the characteristics of paragraphs along this scale. Reliability can be determined through statistical analysis of the paragraphs of the scale

and while the author has statistically tested the sample of 200 boys and girls in kindergartens to calculate the following: (discriminatory force, the relationship of the total degree of the scale, the relationship of the paragraph Domain / Group to which a student belongs, the matrix of internal links).

1 - Paragraph analysis is an important requirement for building measures. This step reveals the accuracy of paragraphs and their ability to distinguish between the highest and lowest levels of the measured attribute. Ebel (1972) points out that statistical analysis helps detect valid paragraphs and exclude invalid paragraphs. In order to calculate the differential strength of the items, the researcher applied the scale to the analysis sample of 200 children. The total score for each questionnaire was then collected and arranged in descending order from the highest to the lowest score. The upper group was named 27% of the pool. One of the lower scores (54) was named the lower group and then the T test was used for two independent samples. Comparison of the calculated T value for each item of the scale to the tabular T value of (1.98) at a level of (0.05). Calculated below the tabular T value and all paragraphs of the scale were characteristic.

2 - The degree of paragraph correlation with the total score of the scale.

To calculate the correlation of the degree of the paragraph to the total score of the scale the researcher used the Pearson correlation coefficient.

3 - The degree of paragraph correlation with the degree to which it belongs.

To verify the correlation of the degree of the paragraph to the total degree to which it belongs, the Pearson correlation coefficient was used.

4- The dimensions of the scale are related.

The correlation matrix between each of the five domains of cautious behaviour was extracted by the overall degree of testing the correlation between the dimensions of the cautious behaviour scale among them calculated. The researcher used the Pearson correlation coefficient.

5- Psychometric characteristics of the scale.

The researcher investigated the psychometric properties of the cautious behaviour scale through the following indicators:

Virtual Honesty:

Virtual honesty is the general appearance of the test in terms of the type of vocabulary and how to formulate and how clear, as well as dealing with the test instructions, accuracy, clarity and objectivity and the suitability of the test for the purpose for which it was developed, which is the least important types of honesty, although it is desirable that the test demonstrates apparent sincerity (Garage, 1997).

Sincerity Construction: This type of honesty shows the relationship between the theoretical basis of the test and the paragraphs of the test, or in other words to what extent the test measures the theoretical assumptions on which the test is based, sometimes called stability: To calculate the stability the scale was applied to a random sample of 50 children and the Kronbach Alpha equation used to calculate the coefficient of stability (0.785), which is considered acceptable.

The final version of the measure of cautious behaviour: The measure consists in its final form of 30 paragraphs distributed over five topics providing a number of alternative answers (0 = always apply, 1 = sometimes apply, 2 = never apply).

B. Raven's Coloured Sequence Arrays for Intelligence: Raven's test

John Raven developed cross-cultural tests applicable in different environments and cultures. This test was applied on children aged 5-6 years of the preliminary grade. The test consists of three groups, namely: -

- 1- Group A: Success depends on the individual's ability to complete a continuous pattern.
- 2 - Group (AB): success depends on the ability of the individual to recognize the separate forms from a holistic pattern on the basis of spatial correlation.
- 3 - Group (B): success depends on the individual's understanding of the rule governing changes in the forms associated logical or spatial characteristics. Each of the above groups consists of 12 matrices, and each matrix contains 6 nested matrices so that the examiner selects one matrix to be the complement of the higher level matrix.

A: Preparation of the Safe Education Program: The goal of any educational program is to contribute to a change in the learner through a positive change in his / her behaviour, way of thinking and skills (Kamp, 1985).

Design of the educational program: After reviewing the literature on educational programs designed for pre-school and the absence of an educational program appropriate to the objectives of the current research, the researcher designed an educational program aimed at the development of caution behaviour in kindergarten children, The following steps were involved:

1 - Defining the objective of the program: The educational objective is "the goal that describes the final results of the educational process" (Nashwati, 1997).

The following general and behavioural objectives were identified .

2 - Preparation of a lesson plan for safe education: After reviewing the theoretical research frameworks, an educational program for the development of cautious behaviour in Riyadh children was developed. This includes thirty (30 minute) lessons. Lesson content was selected based on relevant literature and experience.

3 - Determination of the content of the program: The basic content of the educational program together with the relevant measures of cautious behaviour involved the following steps: Select appropriate means, select ideas, help the child, allow sufficient time for the program and schedule program via calendar.

4 - Preparation of teaching aids and educational techniques for the program of safe education: An Art researcher made use of the following educational methods and techniques; images, blackboard, magnets, cards, cardboard, colours, sticker, display calculator, money, dishes, cups, water, papers, comics, scissors, gypsum, insects.

5 - Determine the method of teaching used in the program: The researcher relied on the following methods during the application of the program: dialogue and discussion, guided play, story-telling, cooperative learning, idea / scenario exploration and role play activities.

6 - Reinforcement used in the program: The researcher used several types of reinforcement during the application of the program, including (verbal and physical reinforcement) .

7 - Feedback: This helps to correct the child's responses through identification and rectification of responses / mistakes (Alazrjawi, 1991).

8 - Evaluation of the educational program: The researcher relied on the general objective of the program on the calendar consistent with the objectives of the program as follows: preliminary evaluation, structural evaluation and final evaluation.

9 - Governing controls within the lessons of the program: The researcher will take into account (avoid criticism, organise lesson time, Gradient display in program, use boosters).

The effectiveness of an educational program based on safe education in the development of cautious behaviour among kindergarten children in kindergarten on 19/2/2019 until 21/4/2019, at the rate of 5 days a week, and the time of each lesson (30 minutes) .

Place of application of the program: The educational program was implemented in suitable locations i.e. classroom, kindergarten garden or similar. Application of post-test: The researcher applied post-test on the children of the experimental group using control officers 10 days after the completion of the educational program.

Track test (Marja): The researcher applied the Marja test on the children of the experimental group 10 days after the completion of the application of the test.

Statistical means: (T-test for two independent samples, Chi squared, Pearson correlation coefficient, Fakronbach equation).

Results and Findings

1: Presenting and interpreting the results. The research objective will be tested. The effectiveness of an educational program based on safe education in developing cautious behaviour of the kindergarten child is determined by testing the validity of the following zero hypotheses:

Through Testing the Validity of the Following Zero Hypotheses

Hypothesis 1: There are no statistically significant differences between the mean scores of the experimental group children on the cautious behaviour scale in the pre and post-tests (i.e. before and after the application of the educational program):

To validate the hypothesis, the researcher used the T-test of two correlated samples as shown in Table (6).

Table 6: T-test results to determine the significance of the difference between the mean scores of the pre and post tests of the experimental group

Significance level (0.05)	Value t		Degrees of freedom	Standard Deviation	SMA	Test	No.	Set
	Table	Calculate						
function	2,045	16,449	29	4,420	18,333	after	30	test
				4,057	36,133	before		

It is clear from Table (6) that the computed T value of 16,449 is greater than the tabular T value of 2,045. Therefore, the null hypothesis which states that there are no statistically significant differences between the mean scores of the experimental group children on the cautious behaviour scale in the pre- and post-tests is rejected.

Hypothesis 2: There are no statistically significant differences between the mean scores of the experimental group children and the average scores of the control group children on the cautious behaviour scale in the post test:

To validate the hypothesis, the researcher used the T-test of two independent samples as shown in Table 7.

Table 7: T-test results to determine the significance of the difference between the mean scores of the experimental and control groups in the post-test.

Significance level (0,05)	Value t		Degree of freedom	Standard Deviation	SMA	No	Group	Test
	Table	Calculate						
function	2	17,531	58	4,057	36,133	30	Experimental	before
				3,128	19,733	30	Control	

It is clear from Table 7 that the calculated T value of 17,531 is greater than the T-value of 2, which means that there are statistically significant differences between the mean scores of the experimental group children and the average scores of the control group on the cautious behaviour scale in the post-test. Therefore, the zero hypothesis, which states that there are no statistically significant differences rejects the alternative hypothesis which states that there are significant differences.

Hypothesis 3: There are no statistically significant differences between the mean scores of the experimental group children on the measure of cautious behaviour in the post-test according to the sex variable:

To validate the hypothesis, the researcher used the T-test of two independent as shown in Table 8.

Table 8: T-test results to determine the significance of the difference between the mean scores of the experimental group in the post-test according to the gender variable.

Significance level (0.05)	Value t		Degree of freedom	Standard Deviation	SMA	No	Gender	Test
	Table	Calculate						
No function	2,048	0,805	28	4,061	36,733	15	male	before
				4,103	35,533	15	female	

Table 8 shows that the calculated T value of (0.85) is lower than the tabular T value of (2,048). The alternative hypothesis that there are no statistically significant differences between the mean scores of the experimental group children on the measure of cautious behaviour is affirmed.

Hypothesis 4: - To identify the effectiveness of an educational program based on safe education in the development of cautious behaviour among kindergarten children:

In order to verify the effectiveness of the tutorial, the researcher used the equation of the ratio of effectiveness to Mac Gogian. The effectiveness of the program (0.68) is shown in Table 9.

Table 9: The arithmetic mean of the experimental group in the pre- and follow-up tests and the program effectiveness ratio

Program effectiveness ratio	The maximum score of the test	Average test scores	Average pre-test scores	Group
0.68	60	35,200	18,333	Experimental

It is clear from Table 9 that the value of the effectiveness rate of the program (0.68) is higher than the ratio.

Which is defined by MacGogian for the effectiveness of the program (0.6) and above which means that the safe education program developed has already contributed to the development of cautious behaviour among kindergarten children.

2: Conclusions

In the light of the results of the current research, the researcher reached the following conclusions:

- 1 - The level of cautious behaviour in the children of the research sample is low and below the required level.
- 2 - The level of safe education of the children of the sample before the application of the program is medium and this indicates that children can develop this through a range of activities that are provided to them.

3: Recommendations

In the light of the results of the research a number of recommendations were reached, including:

- 1 - Include topics related to cautious behaviour and safe education in the contents of the curriculum of each kindergarten and pre-school.
- 2 - Develop a guide for the teachers outlining clearly how to deliver these programs effectively and efficiently.



4: Proposals

In the light of the results, the researcher suggests that:

Preparation of an educational program to acquire the kindergarten child awareness of safe education behaviours using motor story would be beneficial and extend the current work to older children. Extension of the geographic scope of work is also recommended.

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