

The effect of a Fencing Program on **Psychological Safety**

AND WITHDRAWAL BEHAVIOR OF THE HEARING IMPAIRED

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Research Summary

The research aims at:

- 1- Establishing a measurement to psychological safety on people having hearing disability.*
- 2- Deigning and applying a fencing educational program to know its effect on:*

Psychological safety, reducing the withdrawal behavior and learning some fencing skills such as (the steady position, the extrovert movement, stepping forward, retreating, stepping with the extrovert movement, retreating with the extrovert movement).

The researchers used the experimental method on a group consisting of 15 student in addition to 10 more to perform the scouting research.

- *When the research was applied it resulted in differences in the before and after measurements on the main research sample in psychological safety, the withdrawal behavior and fencing skills in the favor of the after measurement.*

Introduction and the Study Problem

Psychological safety is a basic need which people always seek to satisfy. People get their feeling of safety through self confidence in a supportive environment that satisfies their need for achievement, help them in facing frustrations and incompetence and respect their wishes. This need is in all the stages of life and its satisfaction is crucial. According to Maslow, safety needs come after the physiological needs (food, water, etc.) and meeting them leads to reassurance and danger is avoided (18:25).

The hearing disabled have the same feelings as the abled people; they only lack the ability to hear and speak. Therefore, they need to feel psychologically safe in their silent world; a world where they are treated as strangers and are isolated. The only reaction they can do is to withdraw to a world of their own where they miss safety (4:66).

The hearing disabled tend to hold comparisons with others and come to the conclusion that they are different and

feel incompetent in situations that are not problematic to others. They are often shy as their impairment distorts their image so they hide it and get away from others or spite them and that hurts their psychological well-being (17:72).

The limited interaction imposed by interacting only with a few people who can use the sign language, isolation from the social life with other members of society and inability to explore the surrounding environment increase the negative effect of hearing impairment on the psychological and emotional aspects and their relationships with others. They do not feel safe or secured and withdraw and isolate themselves from society (20:87). That concurs with what Adel Abdallah (2004) and Abd Al Ruhman Soliman (2001) mentioned that the deaf isolate themselves from ordinary people minimizing their interaction chances due to the absence of a common language and, therefore, become more inclined to withdraw and isolate (8:198) (6:115).

The absence of psychological safety results in disturbed behaviors including

withdrawal. Withdrawal is a maladjusted behavior; that is it isolates the child from others (7:81).

Ramadan Al Qadafi (1994) states that the hearing disabled tend to isolate themselves and stay alone as a result of the difficulty they face in expressing their feelings. That affects their emotional stability and feeling of safety negatively (21:142).

Sport activities are the corner stone of the educational curriculum of the hearing impaired. These activities have an effective role in developing their potentials and communication skills contributing to maintaining their mental health through self-actualization and treatment of some behaviors including withdrawal and fear of confrontation (18:330).

The researchers believe that fencing is one of the sports that could help this group have psychological safety and stop their withdrawal behavior. Fencing is a sport that builds confidence, increases chances of interaction with others, develops personality and decreases undesirable behaviors like withdrawal. Additionally, it depends on the visual stimuli more than the auditory ones which makes it easy to practice for the hearing impaired. It, therefore, develops their feelings, ideas, feeling of psychological safety and interaction with peers in life situations without withdrawal. For these reasons and the behavioral benefits for the hearing impaired and for believing in the right of this group to practice fencing, the researchers decided to investigate the effect of a fencing program on psychological safety

and withdrawal behavior of the hearing disabled.

Purpose of the Study

The current study aims to:

1. develop a psychological safety scale for the hearing impaired.
2. develop an educational program for fencing and identifying its effect on:
 - a. the psychological safety of the hearing impaired (the study sample).
 - b. decreasing the withdrawal behavior of the hearing impaired (the study sample).

Procedures

I. Approach

The one group pre-test and post-test design of the experimental approach was used.

II. Sample:

The sample was intentionally taken from Al Amal School for the Deaf and Dumb in Sharqia, Egypt during the school year (2011-2012). The 36- student sample included fifth and six graders with a (40-60 decibels) hearing impairment. Ten students participated in the pilot study and eleven students were ruled out: five students had an acute hearing impairment (91 decibels) and 5 students had a high psychological safety. Fifteen students participated in the experimental group. The following tables show the consistency of the sample in all the study variables.

Table (1):

The statistical description of the sample in all the variables N=25

<i>variables</i>	<i>Measuring unit</i>	<i>Mean</i>	<i>Medium</i>	<i>Deviation</i>	<i>kurtosis</i>
<i>Age</i>	<i>year</i>	<i>12.32</i>	<i>12.0</i>	<i>0.98</i>	<i>0.12</i>
<i>Height</i>	<i>cm</i>	<i>151</i>	<i>150.0</i>	<i>9.24</i>	<i>0.28</i>
<i>Weight</i>	<i>kg</i>	<i>49.60</i>	<i>50.0</i>	<i>1.95</i>	<i>0.94</i>
<i>Hearing score</i>	<i>decibel</i>	<i>53.68</i>	<i>55.0</i>	<i>5.55</i>	<i>-1.02</i>
<i>intelligence</i>	<i>degree</i>	<i>67.04</i>	<i>67.0</i>	<i>2.09</i>	<i>0.03</i>
<i>Socioeconomic status</i>	<i>degree</i>	<i>68.24</i>	<i>69.0</i>	<i>2.22</i>	<i>0.05</i>

Table (1) shows that kurtosis value fell within (± 3) range which indicates the consistency of the sample in these variables.

Table (2):

The statistical description of the sample in the withdrawal scale

N=25

<i>variables</i>	<i>Measuring unit</i>	<i>Mean</i>	<i>Medium</i>	<i>Deviation</i>	<i>kurtosis</i>
<i>Withdrawal behavior</i>	<i>degree</i>	<i>24.40</i>	<i>26.50</i>	<i>4.15</i>	<i>-0.57</i>
<i>Internal psychological safety</i>	<i>degree</i>	<i>31.86</i>	<i>30.0</i>	<i>2.6</i>	<i>0.39</i>
<i>External psychological safety</i>	<i>degree</i>	<i>29.84</i>	<i>30.0</i>	<i>2.5</i>	<i>-0.66</i>
<i>Total psychological safety</i>	<i>degree</i>	<i>62.36</i>	<i>62.0</i>	<i>2.4</i>	<i>0.34</i>

Table (2) shows that kurtosis value fell within (± 3) range which indicates the consistency of the sample in these variables.

Table (3):

The statistical description of the sample in the basics skills of fencing

N=25

<i>variables</i>	<i>Measuring unit</i>	<i>Mean</i>	<i>Medium</i>	<i>Deviation</i>	<i>kurtosis</i>
<i>saluting</i>	<i>degree</i>	<i>1.24</i>	<i>1.0</i>	<i>0.65</i>	<i>0.83</i>
<i>The guard position</i>	<i>degree</i>	<i>1.47</i>	<i>1.50</i>	<i>0.46</i>	<i>-0.34</i>
<i>Advance (Marche)</i>	<i>degree</i>	<i>1.51</i>	<i>1.5</i>	<i>0.43</i>	<i>0.57</i>
<i>retreat</i>	<i>degree</i>	<i>1.36</i>	<i>1.5</i>	<i>0.47</i>	<i>-0.41</i>
<i>Development</i>	<i>degree</i>	<i>1.23</i>	<i>1.25</i>	<i>0.52</i>	<i>-0.05</i>
<i>Advance with development</i>	<i>degree</i>	<i>1.40</i>	<i>1.5</i>	<i>0.50</i>	<i>0.15-</i>
<i>retreat with development</i>	<i>degree</i>	<i>1.11</i>	<i>1.0</i>	<i>0.49</i>	<i>0.04</i>

Table (3) shows that kurtosis value fell within (± 3) range which indicates the consistency of the sample in these variables.

III. Data collection tools

- ✓ Restameter to measure height and weight.
- ✓ Hearing test from the school record.
- ✓ Beginners Fencing weapons (Foil designed by one of the researchers)
- ✓ Socioeconomic status form.
- ✓ Porteus Intelligence Test (maze).
- ✓ The Psychological Safety Scale for the Hearing Impaired (by the researchers).
- ✓ Withdrawal Behavior Scale by Adel Abdullah.

Fencing Skills Evaluation:

Fencing skills were evaluated by a committee of university professors majored in fencing. Each skill was rated on a seven-point scale.

Steps of developing The Psychological Safety Scale for the Hearing Impaired:

1- Identifying the main dimensions:

The researchers reviewed the relevant literature and interviewed a lot of specialists in the field in order to decide a form that includes the preliminary dimensions. The form included four dimensions with a concept of each of them. It was shown to a group of specialists in developmental psychology, sport psychology and hearing impairment and they were asked to identify the most important dimensions, add other suitable dimensions and determine the most suitable scale. The results showed their opinions about the order of dimensions and their importance to the hearing impaired children. The researchers chose the dimensions that had more than 90 % agreement.

Table (4):

Experts Agreement on the Scale's dimensions

<i>Dimension</i>	<i>Experts opinions</i>	<i>Agreement percentage</i>
<i>Internal psychological safety</i>	<i>Accepted</i>	<i>100%</i>
<i>External psychological safety</i>	<i>Accepted</i>	<i>100%</i>
<i>Social appreciation</i>	<i>Accepted</i>	<i>80%</i>
<i>Self- confident</i>	<i>Accepted</i>	<i>85%</i>

Table (4) shows the percentage of the experts' opinions about the dimensions. The researchers chose the dimensions that had more than 90 % agreement: internal psychological safety and external psychological safety. They had the highest raters' validity.

2- Identifying the items for each area:

Identifying the main dimensions of the scale, the researchers set the items for each dimension based on its analysis. The researchers also made use of the previous measures in the field in that step.

Each training unit includes

Table (5):

Dimensions and items for each area

<i>n</i>	<i>Dimensions</i>	<i>Items number</i>
<i>1</i>	<i>Internal psychological safety</i>	<i>20</i>
<i>2</i>	<i>External psychological safety</i>	<i>21</i>
<i>3</i>	<i>Total psychological safety</i>	<i>41</i>

Table (5) shows the dimensions of the scale and the number of items per each dimension.

3- Procedures of developing the educational fencing program:

Experts were consulted about the content of the program, its period, numbers of units per week, daily time of the unit and the basic skills. The following table shows the total period of the program, the units and the time of each unit.

Table (6):

<i>Total time</i>	<i>Total number of units</i>	<i>Number of units per week</i>	<i>Time for each unit</i>
<i>3 months</i>	<i>12</i>	<i>1</i>	<i>60 min</i>

The Preliminary Part (Warm up) (10 min): This part was meant to be fun, quick and easy.

The Main Part (40 min): It includes training on the basic skills of fencing in an encouraging way that focuses on group participation and decreasing the withdrawal behavior.

Conclusion (10 min): It includes simple games that help the body systems go back to normal.

Application Steps:

1. Pre-measurement: The variables in the main sample were measured before the program.

2. Implementation of the fencing program: The program was applied over a period of three months.

3. Post-measurement the variables in the main sample were measured after the program.

Statistics

Mean, medium, standard deviation, kurtosis, correlation coefficient, percentages, Cronbach's alpha coefficient, internal consistency.

Table (7):

Significance of the differences and improvement ratio between the Pre-measurement & Post-measurement on the Psychological Safety Scale with its dimensions and the withdrawal behavior of the study sample.

N=15

N	Dimension	Pre-measurement		Post measurement		T-test value	Improvement ratio
		M	SD	M	SD		
1	Internal psychological safety	33.66	2.82	53.93	3.84	16.64	37.58%
2	External psychological safety	29.86	2.94	50.33	2.58	20.22	40.67%
3	Total psychological safety	63.53	3.83	104.20	5.55	23.32	39.03%
4	Withdrawal behavior	27.48	1.01	20.03	2.71	9.9	%37.19

Table (7) shows that the statistically significant differences in the scale with all its dimensions and the Withdrawal Behavior Scale were for the post-measurement. The improvement percentage was (37.19% : 40.67%).

Table (8):

Significance of the differences and improvement ratio between the Pre-measurement & Post-measurements of the basic skills of fencing

N=15

N	variable	Pre-measurement		Post measurement		T-test value	Improvement ratio
		M	SD	M	SD		
1	Saluting	1.08	0.55	3.66	1.26	7.24	70.49%
2	The guard position	1.51	0.41	3.70	0.70	10.35	29.19%
3	Advance(Marche)	1.58	0.52	3.80	1.04	7.32	58.42%
4	Retreat	1.36	0.45	3.86	0.93	9.32	64.76%
5	development	1.10	0.55	3.66	0.89	9.39	69.94%
6	Advance with develop.	1.35	0.61	4.0	0.77	7.36	66.25%
7	retreat with develop.	1.43	0.59	3.31	1.19	5.45	56.79%

Table (8) shows that the statistically significant differences in fencing basic skills were for the post-measurement. The improvement percentage was (29.19% : 70.49%).

Discussion

Table 7 shows statistically significant differences between the pre-measurement and the post measurement in all the dimensions of the Psychological Safety Scale and the Withdrawal Behavior Scale for the post measurement. The differences reflect improvement in the psychological safety and decrease in the withdrawal behavior. The researchers attribute the improvement to the activities and training sessions of the fencing program that help build self-confidence. It is also due to the positive effect of fencing on self-control, movement control, leadership, bravery. The hearing impaired, therefore, feel psychologically safer externally. That feeling arises from feeling of belonging and receiving care, encouragement and support from others. The nature of impairment that imposes psychological loneliness; introversion and poor self-confidence makes the person get their feeling of safety from others and belonging to them. Henceforth, the internal safety is achieved through feeling of external safety. Fall (13) states that psychological safety arises from warm relationships with others. Suheir Kamel (23) and Abd Al Aziz Al Shakhs (1) confirm that the hearing impaired constantly seek to satisfy their needs and get the feeling of being appreci-

ated and loved by others. They need to be psychologically safe to achieve adjustment. They should, therefore, be given chances to do efforts to fulfill that need. If they fail to do so, their frustration results in withdrawal and loneliness. Learning fencing teaches them cooperative learning and constant purposeful movement. Al Sayed Ali And Fayqa Badr (10) confirm that undesirable behaviors could be replaced by desirable ones through training the child in educational situations. Othman Faraag (19) also states that learning a new behavior or experience modifies behaviors. Table 8 shows statistically significant differences between the pre-measurement and the post measurements of the basic skills of fencing for the post measurement which proves the effectiveness of the suggested program. The researchers believe that that improvement is a logical outcome for the attractive, fun and exciting atmosphere of application. Additionally, improvement happened because of the gradual way of training: the trainer did not move from a skill to another until the skill was performed correctly first. Sabaah Ali Saqr (22) states that the hearing impaired can learn fencing skills and the training effect can be transferred to motor behavior.

Conclusions

In the light of the hypotheses, objectives and within limitation of the study sample and results discussion, the following can be concluded:

- 1. The scale prepared by the researchers measures the psychological safety of the hearing disabled students.*
- 2. The educational program suggested by the researchers had a positive effect on the psychological safety (external e³ internal) and teaching the fencing basic skills to the hearing disabled students who participated in the study and decreased their level of withdrawal behavior.*

Recommendations

Based on the results and the limitations of the study, the researchers recommend:

- 1. Using the scale prepared by the researchers with the hearing disabled to facilitate developing programs for the withdrawal behavior on sound scientific basis.*
- 2. Using the suggested program for this group as it has a positive effect on the psychological safety and withdrawal behavior.*

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