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The Relationship between Mindfulness and Self-Efficacy and Its Impact on the Performance Level in Practicing the Front Crawl Swimming Skill of the Deaf Students Enrolled at the Faculty of Sports Sciences at the University of Jordan

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ABSTRACT

Al dababseh M, Abu altaieb M, Abu Dari A, Abu Eid S, Al Qarra S. The Relationship between Mindfulness and Self-Efficacy and Its Impact on the Performance Level in Practicing the Front Crawl Swimming Skill of the Deaf Students Enrolled at the Faculty of Sports Sciences at the University of Jordan. **JEPonline** 2023;26(5):24-39. The purpose of this study was to determine the relationship between mindfulness and self-efficacy and its impact on the performance level in practicing the front crawl swimming skill of the deaf students enrolled at the Faculty of Sports Sciences at the University of Jordan. The subjects consisted of 9 deaf students who were enrolled in the basic swimming skills at the Faculty of Sports Sciences at the University of Jordan during the first semester of the academic year 2022-2023. The subjects along with their peers received 3 lectures per week. The duration of each lecture was 60 minutes over a period of 6 weeks during which the subjects (i.e., sampled students) learned the front crawl swimming skills. During the lectures, a translator recruited by the university communicated what the instructor said. After teaching the participants, their mindfulness and self-efficacy levels were measured using a survey that was assessed for its validity to meet

the study's goals. Then, the respondents' front crawl swimming skills were assessed by swimming experts. The mean of the subjects' skills was calculated using SPSS software. It was found that the mindfulness and self-efficacy levels of the deaf students were moderate. It was also found that there was a positive relationship between mindfulness and self-efficacy from one hand and the performance level in practicing the front crawl swimming skill from another hand among the respondents. It was found that the performance level of the respondents' in practicing the front crawl swimming skill can be predicted based on the prediction equation. This equation was set by the researchers of the present study. It is based on the mindfulness and self-efficacy values. The findings indicate that more attention should be placed on increasing the mindfulness and self-efficacy levels of deaf students because both have a positive effect on the acquisition of swimming skills.

Key Words: Deaf Students, Front Crawl Swimming, Mindfulness, Self-Efficacy

INTRODUCTION

The research findings achieved in the studies on the brain have resulted in placing more attention on the term "mindfulness" because it includes many competencies that can be acquired. Researchers and scholars have exerted much effort in defining the term. Alter (4) recognized the important role of mindfulness, especially in raising attention, increasing concentration, and improving one's recognition. In addition, Drew (13) indicates that the studies on mindfulness have received much attention in the field of sport education. The same point of view was confirmed by De Petrillo et al. (11). The latter researchers added that the Marathon runners must identify the relationship between their minds and bodies in order to show the maximum possible performance to using their potentials. In fact, the ability to focus during the Marathon enables the runners to maximize their performance level.

Mindfulness contributes to choosing suitable stimuli from the external environment, which helps in having a broad vision for events and providing one with more opportunities to learn. This is important because a narrow vision and perception of events often results in limiting a person's thinking and living the same routine every day. Mindfulness is linked to increasing the joy of experiencing new things in one's environment. The practice of mindfulness and focusing attention on everything that occurs simultaneously in the surrounding environment allows one to assess his or her reality without making an emotional negative judgment (8).

The most popular definition for mindfulness is offered by Jon Kabat-Zinn (17). Jon, the founder of mindfulness-based stress reduction (MBSR) more than 40 years ago, adds that mindfulness is represented in showing attention in a specific and intentional manner to the current moment. He also adds that mindfulness manifests in having an open heart and an unbiased recognition for the concerned situation.

Hassed (16) adds that mindfulness is manifested in numerous ways related to education. His teaching, research and clinical interests include mindfulness-based stress management that indicates mindfulness improves mental and physical wellbeing, as well as communication skills. Also, he states that mindfulness promotes empathy, fosters emotional development, improves education quality, and raises performance.

As to the latter response, increasing performance, Worthen and Luiselli (25) added that having a high level of mindfulness by individuals who are attempting to acquire physical skills increases their focus and helps them make better decisions and show improvement in responses faster. Also, they concluded that having a high level of mindfulness increases their mental endurance level, which enables them to analyze skills more effectively. Ultimately, the decrease in stress and fatigue experienced by athletes and others allows for more fun in sports. Conversely, individuals with low levels of mindfulness are challenged to carry out their tasks, and they have difficulties in applying the information they learned in their practical lives. Oftentimes, they cannot address the problems they face in life.

Ergul (14) defines self-efficacy as the belief and/or expectation in one's ability to carry out a task successfully. It involves one's confidence in him- or herself of which Dianel (12) indicated that self-efficacy may be considered as the most important type of efficacy (i.e., the ability to perform a task satisfactorily). It can be used to predict the actual performance level when the basic skills and relevant motives exist. Barry and Zimmerman (7) add that self-efficacy plays a positive role in raising the students' motivation, perseverance, and academic achievement levels.

Komarraju and Nadler (20) add that the self-efficacy of students enables them to meet their challenge-related goals and acquire knowledge. Vasile et al. (21) state that the students who have a high self-efficacy level set advanced goals for themselves, and they use strategies that require employing higher thinking skills. They also pointed out that the same students excel in performance when competing with students who have a low self-efficacy level, even if the students have similar levels of capabilities.

Interestingly, Betz (9) adds that self-efficacy is a psychological need that drives people to be very persistent. Accordingly, self-efficacy is generated through having the belief by that he or she has the ability and competence needed for doing the tasks successfully. Bandura (5,6) sets the basics of the term self-efficacy through the social learning theory. He adds that one's behavior is generated from the way in which a person interacts with the surrounding environment. Self-efficacy is a driving force that motivates a person to carry out a specific behavior. Self-efficacy guides a person based on his or her expectations and ability to achieve. Also, Bandura (5,6) state that self-efficacy develops based on the successful past experiences, reinforcement of the same, and the emotional excitement linked to a person's expectations and beliefs about his or her capabilities to carry out the work that determines success. Self-efficacy consists of three dimensions shown below:

1. **Magnitude**, which refers to the power of one's motive(s) to achieve in various contexts.
2. **Generality**, which refers to the transmission of self-efficacy in similar situation.
3. **Strength,** which means that the individuals with low self-expectations show low self-efficacy and performance levels while the individuals with high self-expectations show high self-efficacy level. Individuals with high self-expectations are more persistence when carrying out tasks.

According to Fukuchi (15), through sports, people without special needs can be merged with people with special needs in a positive manner. This merge experience can be carried out

when engaged in some sport activities with a specialized supervisor present. The merge allows the people with special needs to achieve things they thought impossible while providing people with special needs with positive experiences, thus making it possible for them to interact positively with non-special needs people. It allows people with special needs to make decisions, develop their social skills, and form friendships other than their friendships with their relatives. It allows people with special needs to hold leadership positions and acquire vital social interaction skills.

Walker (23) adds that the negative perceptions toward people with special needs make non-special needs people refrain from playing with people who have special needs. Some employers may refrain from recruiting the people with special needs, because they believe that people with special needs are inferior to normal people. The fact is that sports play a very important role in fighting against the prevalence of the negative perceptions (23). Hence, being part of a sports program by people with special needs is good, especially since it puts them in situations that show their capabilities rather than showing their disabilities.

Some people with special needs, especially deaf people believe that their disabilities hinder them from enjoying their social, economic, and political rights. As a result, they are likely to question their value in society. Fortunately, in this regard, engaging deaf people in sport activities plays a significant role in helping them to acquire social and communication skills. In particular, the participation of deaf people promotes awareness about the significance of team work, cooperation, self-discipline, and respect for all people. Participation enables deaf people to handle risks effectively. It teaches deaf people the way of managing success and failure in a secure and supportive environment, and it assists the deaf in developing the skills needed in practical aspects of life (10).

Two important studies (2,22) examined the impact of sport and physical exercises on the quality of life and psychological variables among deaf people. The studies are conducted by researchers who are specialized in sport psychology. Many of the students learned how to meet the requirements of university life through acquiring life, academic, and sport skills. Vernacchia (22) reported that the students are more likely to succeed in carrying out tasks in their lives. The same is suggested by Abu Altaieb and colleagues. (2). The latter researchers also concluded that the swimming courses have a positive impact on the performance level of the deaf students in practicing the front crawl swimming skill, as well as having a positive impact on their life skills.

The purpose of the present study was to determine the relationship between mindfulness and self-efficacy and the impact on the performance level of the deaf students in practicing the front crawl swimming skill enrolled at the Faculty of Sports Sciences at the University of Jordan. People with special needs can become students in the university to learn side by side with their non-deaf peers. The vision of the University of Jordon suggests that people with special needs must be provided with care and attention, and that they must be engaged in the process of achieving development. After all, it is obvious that the people with special needs, such as deaf students have rights that are guaranteed by the applicable laws of the Jordanian state. In fact, it should be noted that there are many students with special needs learning at the Faculty of Sports Sciences at the University of Jordan.

The special needs students must also acquire many skills that are needed for playing sports. For example, they too must pass the practical test of certain skills at the end of the semester. The basic swimming skills course is considered a practical course, and it is part of the syllabus of the Faculty of Sports Sciences at the University of Jordan. In the basic swimming skills course, the students acquire the basic swimming skills. Through the latter course, they also acquire the front and back crawl swimming skills. The researchers of the present study taught this course for both the normal students and the disabled students, including the deaf students. Based on their experiences in this regard, they did not focus on the deaf students' disability. In fact, they focused on improving the deaf students' capabilities in practicing the swimming skills through having a greater cooperation between the deaf students and the normal students.

From the researchers' perspective, the importance of this study arises from the significance of university life for the respondents. To be specific, university life provides the deaf students with new social and academic experiences. The present study is considered important because it sheds a light on the relationship between mindfulness and self-efficacy and its impact on the performance level of deaf students in practicing the front crawl swimming skill. It is considered important because it offers results that contribute to promoting awareness among deaf students, and it is considered relevant among college students because the results may contribute to improving the performance of deaf students when practicing the skills needed for playing in various sport games. Therefore, the purpose of this study was to provide answers for the following questions:

Q.1. What are the mindfulness and self-efficacy levels of the study's respondents?

Q.2. Is there a statistically significant relationship at the alpha level of $P \leq 0.05$ between mindfulness and self-efficacy among the study's respondents, and does this relationship have any impact on the performance level of the deaf students in practicing the front crawl swimming skill?

Q.3. What is the equation that can be used to predict the performance level of the respondents in practicing the front crawl swimming skill based on the mindfulness and self-efficacy levels?

The Study's Procedures

The researchers of the present study adopted a descriptive approach because it suits the nature of the study's problem. The study's sample consisted from 9 deaf students who were enrolled in the basic swimming skills at the Faculty of Sports Sciences at the University of Jordan during the first semester of the academic year 2022-2023. The relevant written approvals for participating in the present study were obtained from the members of the sample.

Table 1. Means and Standard Deviations of the Subjects' Body Mass, Height, and Age.

Variable	Mean	Standard Deviations
Body Mass (kg)	65.7	7.49
Height (cm)	171.4	7.6
Age (Years)	21.1	1.05

The Data Collection Methods

The researchers of the present study used the Mindfulness and Self-Efficacy Scales that are shown in Appendix A. The Scales were designed by Alshalwe (3). Each scale consists of 15 items. The Scales were filled by the respondents. The reliability coefficients were calculated. The reliability coefficient is represented in the Spearman correlation coefficient. The test-re-test method was used with targeting an exploratory sample that consisted of 10 students. The members of the exploratory sample are not members in the actual sample of the study. They successfully passed the basic swimming skills course earlier.

Table 2. The Values of the Reliability Coefficient.

Scale	Reliability Coefficient
Mindfulness	0.8
Self-Efficacy	0.82

The values of the reliability coefficient are considered high, which indicates that the results of the Scales are reliable and appropriate for evaluating the purpose of this study**.** To calculate the Mindfulness and Self-Efficacy levels, the 5 Point Likert Scale was used. It consists of the following rating categories and scores: (strongly agree = 5 scores; strongly agree = 4 points; neutral = 3 points; disagree = 2 points; and strongly disagree = 1 point).

The following categories were adopted to classify the means reached through the Mindfulness and Self-Efficacy Scales: (1 – 2.33: Low level; 2.34 – 3.66: Moderate level; 3.67 or above: high level).

The researchers of the present study designed a form for measuring the respondents' performance level in practicing the front crawl swimming skill. This form was filled by specialized trainers who are specializing in swimming. The relevant means were calculated based on their assessment. The latter assessment was based on the following categories:

The technique used for arm movement: 10 scores

The technique used for leg movement: 10 scores

The pose of body and head: 10 scores

The overall alignment between body parts: 10 scores

Breathing: 10 scores

The sum of the scores was divided by 5. In this way, the score is set out of 10 scores for the students.

RESULTS

Results Related to the First Question

Q.1. What are the mindfulness and self-efficacy levels of the study's respondents? To answer this question, means, standard deviations, and relative significance were calculated for the items of the Mindfulness and Self-Efficacy Scales. Tables 3 and 4 below show the values.

Table 3. The Means, Standard Deviations, and Relative Significance for the Mindfulness Level of the Respondents.

No.	Statement	Mean	Standard Deviations	Relative Significance	Rank	Level
1.	I accept the ideas that I check their validity.	3.33	1.00	66.6	8	Moderate
2.	I interact with the tasks I carry out.	3.66	.70	73.2	5	Moderate
3	I believe that I don't have any creative idea.	3.66	.70	73.2	5	Moderate
4.	I accept new ideas when carrying out my tasks.	3.55	1.01	71	7	Moderate
5.	I use conventional thinking methods when carrying out my tasks.	2.66	1.00	53.2	14	Moderate
6.	I believe that it is not important to ask others about the tasks they have carried out.	3.77	.44	75.4	4	High
7.	I avoid participating in conversations that require thinking.	2.88	.78	57.6	13	Moderate
8.	I trust my creative capabilities.	3.88	.33	77.6	3	High
9	I perceive the problem that I want to solve from a holistic perspective.	3.11	.33	62.2	12	Moderate
10	I face difficulty in identifying the changes that occurred to things.	4.00	.00	80	1	High
11	I do things with impulsiveness and without concentration.	3.22	.83	64.4	9	Moderate
12	I seek imitating others.	3.22	.66	64.4	9	Moderate
13	I believe that I am curious to know the things that occur in the surrounding environment.	3.22	.97	64.4	9	Moderate
14	I am curious to know the way of doing the things that I don't know how to do.	4.00	.00	80	1	High
15	My acceptance for my reality surpasses my desire to change it.	2.66	1.00	53.2	14	Moderate
	Overall	3.39	.21	67.8		Moderate

Table 4. Means, Standard Deviations, and Relative Significance for the Self-Efficacy Level of the Respondents.

No.	Statement	Mean	Standard Deviations	Relative Significance	Rank	Level
1.	If I exerted adequate amount of effort, I can carry out academic tasks successfully.	3.55	.88	71	9	Moderate
2.	I have the ability to convince others with my opinion when they have different opinions than mine.	3.11	.33	62.2	11	Moderate
3.	I seek meeting my goals with showing accuracy.	3.77	.97	75.4	2	Moderate
4.	I can deal with the situations that challenge my capabilities.	4.00	.70	80	1	High
5.	I rely on my capabilities in dealing with emergencies.	3.66	.86	73.2	7	Moderate
6.	I enjoy much intellectual flexibility that enables me to find several solutions for any problem that might face me	3.77	.83	75.4	2	High
7.	I handle difficult situations with calmness.	3.77	.83	75.4	2	High
8.	I re-try meeting my goals in case I failed in meeting them in the first attempt.	3.77	.83	75.4	2	High
9.	My friends come to me when they get themselves into trouble.	3.22	.44	64.4	10	Moderate
10.	I face difficulty in finishing the tasks assigned to me.	2.77	.66	55.4	13	Moderate
11.	I feel frustrated when getting myself into trouble.	3.77	.44	75.4	2	High
12.	I face difficulty in making new friends.	2.66	1.22	53.2	14	Low
13.	I experience anxiety when I start doing my homework.	2.55	1.01	51	15	Low
14.	I suffer from difficulty in understanding curricula.	3.00	.00	60	12	Moderate
15.	I refrain from participating in non-academic activities at the university.	3.66	1.65	73.2	7	Moderate
	Overall	3.40	.26	68		Moderate

Based on Table 3, the mindfulness level of the study's sample was moderate because the overall mean is 3.39. Based on Table 4, the self-efficacy level of the study's sample was moderate because the overall mean was 3.40.

Results Related to the Second Question

Q.2. Is there any statistically significant relationship at the alpha level of P ≤ 0.05 between mindfulness and self-efficacy among the study's respondents, and does this relationship have any impact on the performance level of deaf students in practicing the front crawl swimming skill?

To answer the questions, the values of the correlation coefficient between mindfulness and self-efficacy were calculated from one hand and performance level in practicing the front crawl swimming skill from another hand. Table 5 presents the values.

Table 5. Values of the Correlation Coefficient between Mindfulness and Self-Efficacy from One Hand and Performance Level in Practicing the Front Crawl Swimming Skill from Another Hand.

Scale	Mindfulness	Self-Efficacy
The Performance Level in Practicing the Front Crawl Swimming Skill	0.88*	0.85*
Self-Efficacy	0.94*	

*Statistically significant at the alpha level of P ≤ 0.05.

Based on Table 5, the following results were reached:

1. There is a positive statistically significant relationship at the significance level of P ≤ 0.05 between mindfulness and self-efficacy among the respondents.

2. There is a positive statistically significant relationship at the significance level of P ≤ 0.05 between the performance level in practicing the front crawl swimming skill and self-efficacy level of the respondents.

3. There is a positive statistically significant relationship at the significance level of P ≤ 0.05 between the performance level in practicing the front crawl swimming skill and mindfulness level of the respondents.

Results Related to the Third Question

Q.3. What is the equation that can be used to predict the performance level of the respondents in practicing the front crawl swimming skill based on the mindfulness and self-efficacy levels?

To answer this question, the stepwise multiple linear regression analysis was conducted. Tables 6 and 7 present the results of the analysis. First, the values of mindfulness and self-efficacy were administered as independent variables (predictors). Then, the values of the performance level of the respondents in practicing the front crawl swimming skill were administered as dependent variables (the variable to be predicted). Tables 5 and 6 present the results of the stepwise multiple linear regression analysis.

Table 6 presents the results of the analysis of variance (ANOVA). The f value was 10.581, which is considered statistically significant at the alpha level of P ≤ 0.05. That indicates that the

model of the stepwise multiple linear regression analysis can be used to predict the performance level of the respondents in practicing the front crawl swimming skill. This model can predict the performance level in practicing the front crawl swimming skill based on the mindfulness and self-efficacy levels.

Table 6. The Results of the Analysis of Variance (ANOVA) for the Stepwise Multiple Linear Regression Analysis to Predict the Performance Level in Practicing the Front Crawl Swimming Skill Based on Mindfulness and Self-Efficacy.

Model (1)	Sum of Squares	Degree of Freedom	Mean Square	F value	Sig
Regression	4.145	2	2.072	10.581	0.0*
Residual	1.175	6	.196		
Sum	5.320	8			

*Statistically significant at the alpha level of P ≤ 0.05.

Table 7. The Results of the Stepwise Multiple Linear Regression Analysis and the Percentages of the Changes to the Performance Level in Practicing the Front Crawl Swimming Skill that can be Attributed to the Mindfulness and Self-Efficacy Levels.

Variable	B Coefficient Value	Beta Coefficient Value	The Coefficient of Cumulative Correlations R	The Cumulative Contribution percentage R^2	The Partial Contribution Percentage
Constant	-1.835				
Self-Efficacy	.728	.189	0.839	%70.5	%70.5
Mindfulness	2.122	.702	0.882	%77.9	%7.4

*Statistically significant at the alpha level of P ≤ 0.05.

Table (7) presents the results of the stepwise multiple linear regression analysis for the independent variables (i.e., self-efficacy and mindfulness). The findings indicate: (a) that 70.5% of the changes to the respondents' performance level in practicing the front crawl swimming skill can be attributed to self-efficacy; (b) that 7.9% of the changes to the respondents' performance level in practicing the front crawl swimming skill can be attributed to mindfulness; and (c) that 77.9% of the the changes to the dependent variable (i.e., the performance level in practicing the front crawl swimming skill) can be attributed to self-efficacy and mindfulness jointly.

DISCUSSION

Based on Tables 3 and 4, the mindfulness and self-efficacy levels of the study's sample are moderate. The researchers of the present study attribute the latter result to the fact that the system of merging deaf students in the faculty of sport sciences at the University of Jordan provides deaf students with opportunities to develop positive perceptions towards themselves. Furthermore, the direct interaction of the deaf students with their normal peers in a real environment in practical courses contributed to raising their autonomy level that contributed to reducing their extent of reliance on others by making them stronger in physical and mental aspects. Also, it contributed to promoting more respect among the deaf students for themselves. In addition, it contributed to raising their self-confidence levels that contributed to improving their social and life skills, which contributed to reducing the negative impact of the stigma associated with the disability.

The same was suggested by Abu Altaieb and colleagues (2) who also said that merging deaf students with their non-deaf peers serves as a perfect tool for socializing deaf students by empowering them and raising their autonomy levels. Marschark and Spencer (19) reported that people suffering from a hearing disability do not show a decline in their IQ levels, that they can carry out their cognitive functions just like their normal peers. Therefore, merging the people suffering from a hearing disability in the teaching-learning process at the Faculty of Sport Sciences at the University of Jordan contributed to improving their cognitive, behavioral, and emotional competencies. Developing such competencies enable them to do the tasks assigned to them at the swimming courses. It also enables them to improve their performance level when practicing a skill.

In terms of the relationship between mindfulness and self-efficacy and its impact on the performance level of deaf students in practicing the front crawl swimming skill, Table 5 shows that there is a positive relationship. The researchers of the present study attributed the latter result to the fact that merging deaf students with normal peers improved the deaf students' abilities to concentrate, think realistically, show flexibility in responding and handling emergencies. They added that the merge contributed to reducing the number of mistakes committed by the deaf students while learning in the swimming courses. The respondents showed moderate mindfulness and self-efficacy levels. Therefore, it can be concluded that mindfulness and self-efficacy influence the learning process. That is because mindfulness and self-efficacy make deaf students focus their awareness on the learning process. It is also because mindfulness and self-efficacy help deaf students to be more flexible in thinking. It is because mindfulness and self-efficacy allows deaf students to use their expertise and reflect on their ability in the best manner possible. In this regard, Bandura (6) adds that the Self-Efficacy and Mindfulness Scales aim to measure the respondents' extent of confidence in their capabilities to carry out the targeted tasks.

This relationship positively affects the sampled deaf students' performance level in practicing the front crawl swimming skill. The process of merging deaf students in the swimming courses with having a translator specialized in sign language who is always with the deaf students should contribute to making changes to the way in which the deaf students think. It shall also make changes to the way in which the deaf students use the expertise they acquire through the courses. The same is suggested by several educational studies on mindfulness. Williams

and Penman (24) believe that mindfulness is a method that is based on using the mind and the body jointly. Bandura (6) adds that self-efficacy contributes to improving one's confidence in his or her ability to successfully do the tasks that are assigned to him or her. In this regard, Caldwell et al. (18) added that there is a positive relationship that exist being mindfulness and self-efficacy among the ones they sampled.

Based on the results of the present study, the researchers can predict the performance level of deaf students in practicing the front crawl swimming skill through identifying their levels of self-efficacy and mindfulness. They can predict the latter performance level through using the equation shown below:

The performance level of deaf students in practicing the front crawl swimming skill = 1.835 + 0.728 * self-efficacy score + 2.122 * mindfulness score.

For example, if the self-efficacy value is 3 scores and the mindfulness value is 3 scores, the performance level in practicing the front crawl swimming skill of the deaf student can be predicted as follows:

1.835 + 0.788 * 3 + 2.122 * 3 = 6.175

The results of the study conducted by Wahed and Al Zahraa (1) indicate that the adaptation of the students with a hearing disability with university life can be predicted through identifying their scores on the scale of the perceived self-efficacy for social skills. Bandura (5) adds that having high expectations by people about themselves and various aspects of their self-efficacy shall enable them to show persistence. He adds that having such high expectations shall contribute to raising people's academic achievement level.

CONCLUSION

After reviewing the results of the present study, the researchers recommend raising the levels of mindfulness and self-efficacy of deaf students enrolled at the Faculty of Sports Sciences at the University of Jordan. That can be done through developing programs that aim to meet this goal. The researchers of this study believe that it is necessary to develop such programs due to the significant role of mindfulness and self-efficacy in fighting against the spread of the stigma associated with the disability of deaf students. They recommend engaging the deaf students in doing tasks with their normal peers at the practical courses given to them. That shall contribute to ensuring the success of the deaf students in doing the physical task assigned to them efficiently. The positive attitude towards sports worldwide plays a significant role in narrowing the gap between deaf people and non-deaf people. Narrowing such a gap should contribute to developing people and society.

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Appendix A

The Mindfulness Scale

No.	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	I accept the ideas that I check their validity.					
2	I interact with the tasks I carry out.					
3	I believe that I don't have any creative ideas.					
4	I accept new ideas when carrying out my tasks.					
5	I use conventional thinking methods when carrying out my tasks.					
6	I believe that it is not important to ask others about the tasks they have carried out.					
7	I avoid participating in conversations that require thinking.					
8	I trust my creative capabilities.					
9	I perceive the problem that I want to solve from a holistic perspective.					
10	I face difficulty in identifying the changes that occurred to things.					
11	I do things with impulsiveness and without concentration.					
12	I seek imitating others.					
13	I believe that I am curious to know the things that occur in the surrounding environment.					
14	I am curious to know the way of doing the things that I don't know how to do.					
15	My acceptance for my reality surpasses my desire to change it.					

The Self-Efficacy Scale

No.	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	If I exerted adequate amount of effort, I can carry out academic tasks successfully.					
2.	I have the ability to convince others with my opinion when they have different opinions than mine.					
3.	I seek meeting my goals with showing accuracy.					
4.	I can deal with the situations that challenge my capabilities.					
5.	I rely on my capabilities in dealing with emergencies					
6.	I enjoy much intellectual flexibility that enables me to find several solutions for any problem that might face me.					
7.	I handle difficult situations with calmness.					
8.	I re-try meeting my goals in case I failed in meeting them in the first attempt.					
9.	My friends come to me when they get themselves into trouble.					
10	I face difficulty in finishing the tasks assigned to me.					
11	I feel frustrated when getting myself into trouble.					
12	I face difficulty in making new friends.					
13	I experience anxiety when I start doing my homework.					
14	I suffer from difficulty in understanding curricula.					
15	I refrain from participating in non-academic activities at the university.					