HEALTH AWARENESS AS A PREVENTIVE FACTOR AGAINST SKIN INJURIES IN GYM

Emad Abbas Hussein
Kirkuk University
IRAQ

Mahmoud Abbas Hussein
Kirkuk University
IRAQ

Corresponding Author: emadabbas@uokirkuk.edu.iq

Recieved: January 12, 2026 **Accepted:** March 17, 2026

ABSTRACT

Background. Fitness centers have experienced tremendous growth in recent years, becoming a top destination for young people and bodybuilders looking to improve their fitness, build muscle, and enhance their physical performance. **Objectives.** The study aimed to identify level of health awareness among gym members regarding prevention of skin injuries , and to identify incorrect health behaviors within gyms that contribute to increasing likelihood of skin problems. **Method**. The researchers adopted descriptive approach with its survey method, as it is the most suitable for nature of the current study. The research sample was selected purposively from original research population, and sample consisted of 100 gym members who met participation requirements, thus achieving an appropriate representation of research population and contributing to achieving the study objectives. Sample was divided into a construction sample consisting of 70 gym members, divided into 6 gym members for pilot application and 64 gym members for statistical analysis, while application sample consisted of 30 gym members. **Results.** Results of the study showed that general level of health awareness among gym members was very good, reflecting a general positive understanding of importance of preventive behaviors. **Conclusion.** The researchers recommends adopting regular health awareness programs within gyms that focus on early detection of skin injuries and their transmission mechanisms.

Keywords; health awareness, preventative factor, skin injuries, gym.

A. INTRODUCTION

Gyms have witnessed remarkable expansion in recent years, becoming a primary destination for young people and bodybuilders seeking to improve fitness, increase muscle mass, and enhance physical performance (Athaya et al., 2023; Hardinata et al., 2024; Suniga et al., 2025). However, the gym environment has characteristics that can increase the likelihood of skin problems for users, such as humidity and heat, excessive sweating, frequent contact with shared equipment and surfaces, use of changing rooms and showers, and the sharing of personal items or inadequate equipment sterilization. Skin injuries in training environments are not just a "superficial" problem, but may turn into a training, psychological and social obstacle; as they may cause pain or chronic itching, and may affect the quality of sleep and concentration, and may push some practitioners to stop training or reduce its intensity, in addition to the possibility of some of these cases being transmitted between practitioners via surfaces, towels or clothes.

Concept of health awareness emerges as a pivotal preventive approach, because it guides the behavior of gym-goers (personal hygiene, wound care, use of personal equipment, adherence to sterilization) and reduces the chances of skin injuries occurring and spreading. Youssef et al. (2025), stated in his study that the health aspect includes two main components: health culture, which This involves acquiring health knowledge and information and health awareness, which is represented in practicing and applying that knowledge and information in practical reality. As indicated by the study (Badr, 2023), health awareness is linked to healthy behavior, performance level, and commitment to sound practices in the sports field. The importance of the research lies in providing gym management and trainers with preventive policies: sterilizing equipment, providing disinfectants, requiring personal towels, and preventing the sharing of tools. Bodybuilders/athletes can help reduce the likelihood of skin infections by adopting clear behaviors (showering early after exercise, changing clothes, drying sweaty areas, not sharing equipment). It reduces the interruption of training and the psychological impact associated with skin problems, and enhances the overall safety of the training environment within the gyms.

Gym workouts are associated with improved physical health, the reality on the ground indicates that many gyms suffer from inconsistencies in the implementation of hygiene and sterilization procedures. Furthermore, the level of adherence to healthy practices varies among gym-goers, particularly among bodybuilders, whose training is characterized by high intensity, frequent sweating, and constant contact with shared equipment (Da'i et al., 2024; Yusroni, 2024). Given that health guidelines indicate a high risk of skin infections in gyms when precautions are not taken, there is a clear need to assess the level of health awareness among bodybuilders and determine its contribution to preventing skin injuries within the gym, the research problem is defined by the following main question: What is level of health awareness among bodybuilders/athletes in gyms, and what is its role as a preventive factor against skin injuries?

Research objectives to identifying the level of health awareness among gym players regarding the prevention of skin injuries. Revealing the relationship between the level of health awareness and the occurrence of skin injuries among gym-goers. Identifying

unhealthy behaviors within gyms that contribute to an increased likelihood of developing skin problems. Research hypotheses there is a statistically significant relationship between the level of health awareness and the degree of skin injuries among gym-goers. A higher level of health awareness contributes to reducing the incidence of skin problems among gym-goers. Poor health awareness leads to an increased likelihood of skin infections spreading among gym-goers.

B. METHOD

Participant

The research sample was selected purposively from the original research population. The sample consisted of (100) players from the gyms included in the study, who met the participation requirements, in a way that achieves a suitable representation of the research population and contributes to achieving the study's objectives. The sample was divided into a construction sample consisting of (70) players who were divided into (6) players for the exploratory application sample and (64) players as a sample for statistical analysis, while the application sample consisted of (30) players.

Research Design

The research community consists of gym members, and was deliberately selected from four gyms: Be One Gym, Omer Gym Hall, Star Gym Hall, Power Gym Hall. This is because these are the main gyms in Kirkuk Governorate, which witness a continuous turnout of people practicing physical activity, and they provide a suitable environment for applying the study tools, due to the cooperation of the gym administrations with the researcher, as well as their proximity to the researcher’s place of residence.

Research procedures

Looking to that survey It is from more Tools Usage in collection Information and data from Its sources Original, Lost Follow researcher group from procedures Scientific The organization To build tool Search And its application, And it was represented In the It comes:

1. Defining the questionnaire's themes.
2. Formulating the questionnaire items.
3. Applying the paragraphs to a sample similar to the research population.
4. Conducting statistical analysis of the scale's statements.

Scale construction

The researchers depended in building scale on foundations scientific followed in numbers measurements psychology and educational, and with it fits with nature search and its goals, and bitter building scale several stages sequential:

Defining the scale's axes: It was completed to set axes scale from during approval methodology scientific organizer, based to analysis literature theory and studies previous the connection on the subject, please on examining on the reviewer specialized in the field. as well he used researcher opinions number from experts and specialists in fields education physical and sciences sports medicine the athlete, that's from during procedure interviews

a personality with them, and the specialization is for the purpose of determining the most suitable of them and adding or modifying the axes in a way that they see as serving the research objectives. Table (1) shows percentages of agreement of experts and specialists on the proposed axes.

Table 1. Percentage Of Agreement Among Experts And Specialists Regarding Proposed Axes For Health Awareness Scale As A Preventive Factor Against Skin Injuries In Gyms

No.	Proposed themes	Experts No.	Agreed	Agreement percentages
1	Health awareness and personal hygiene	8	8	100%
2	Healthy behavior inside gyms		8	100%
3	Healthy behavior inside gyms		8	100%
4	Health awareness and prevention		8	100%

Preparing scale items

The researcher developed the scale items based on previously adopted axes, through reviewing and analyzing several scientific sources, references, and previous studies related to the research topic. The scale items were distributed balanced across its axes, with a total of (20) items. The researchers adopted a graduated response system: (always, often, sometimes, rarely, never). These responses were assigned numerical scores of 1, 2, 3, 4, and 5, respectively, for statistical analysis. Table 2 shows the distribution of the axes and the number of items for each axis:

Table 2. Number Of Items Proposed For Health Awareness Scale

No.	Axes	Paragraphs No.
1	Health awareness and personal hygiene	5
2	Healthy behavior inside gyms	5
3	Healthy behavior inside gyms	5
4	Health awareness and prevention	5

Determining directions Scale

The researchers were keen to prepare clear and simple instructions for scale, ensuring that it could be easily understood by the members of research sample. The instructions included clarifying purpose of scale and how to answer its items, without leaving any item unanswered, while emphasizing confidentiality of information and its use for scientific research purposes only.

Pilot Application

The researchers conducted a pilot application of scale with a limited sample of 20 players from research population on Monday, January 26, 2026. These players were

randomly selected before final application of scale. This pilot aimed to ensure clarity and accuracy of scale items, their suitability for participants' level, and time required to complete each item. Pilot also helped identify any difficulties or feedback participants might encounter while answering items, allowing researcher to make necessary adjustments before finalizing scale. Based on results of pilot, scale's suitability for application to main research sample was confirmed.

Scientific Foundations

Scale validity: The researchers presented scale in its initial form to a group of experts and specialists in fields of physical education, sports science, and sports medicine. This was done to verify validity of scale items and their suitability for axes they were designed to measure, as well as to confirm feasibility of applying scale to research sample. Table (3) illustrates this.

Table 3. Percentage of agreement among experts and specialists regarding items of Health Awareness Scale as a preventive factor against skin injuries in gyms

No.	Axes	Paragraphs	Experts No.	Agreed	Agreement percentages
1	Health awareness and personal hygiene	2-4	8	8	100%
		5-1-3	8	8	100%
2	Healthy behavior inside gyms	4-2	8	8	100%
		3-5-1	8	8	100%
3	Skin Injury Awareness	2-4	8	8	100%
		5-1-3	8	8	100%
4	Health Education and Prevention	4-2	8	8	100%
		3-5-1	8	8	100%

Discriminatory Power Method (Two End Groups)

The researchers used discriminatory power method (two extreme groups). in order to distinguishing between paragraphs in structure scale and this method is characterized by "dividing sample members into two extreme groups to achieve this, we arrange scores of affiliates in descending order from highest to lowest and then divide them into two equal groups" (Malham, 2011). A percentage 27 % of the highest and lowest scores was chosen to represent the two extreme groups. This percentage was chosen due to small size of sample. Each group included 17 players after their scores were arranged in ascending order in light of their answers to items of scale.

Table 4. Shows means, standard deviations, calculated t-values, and sig values for two extreme groups of scale

Dimension	Phrase sequence	Lower group		Upper group		Calculated (t) value	Sig. value	Sig. level
		M.	St.d	M.	St.d			
Health awareness and personal hygiene	1	2.941	826	4.058	.555	4.625	000	Sig.
	2	2.882	781	4.058	.555	5.060	000	Sig.
	3	2.529	1.178	4.058	428	5.027	000	Sig.
	4	3,000	500	3.941	826	4.016	000	Sig.
	5	2.764	752	3.647	931	3.038	005	Sig.

JOR ReKat (Rekreasi Masyarakat)
Prodi Olahraga Rekreasi
Fakultas Ilmu Olahraga
Universitas Negeri Jakarta

Healthy	1	2.823	1.131	4.235	437	4,800	000	Sig.
behavior	2	3,000	935	3.764	437	3.054	006	Sig.
inside gyms	3	3,000	707	4.00	707	4.123	000	Sig.
	4	2.529	1.178	4.117	485	5.137	000	Sig.
	5	2.941	428	3.941	826	4.426	000	Sig.
Skin Injury	1	2.941	826	3.882	696	3.589	001	Sig.
Awareness	2	2.705	1.046	4.058	428	4.932	000	Sig.
	3	2.705	985	4.235	.562	5.559	000	Sig.
	4	2.941	428	3.941	826	4.426	000	Sig.
	5	2.529	1.178	4,000	612	4.564	000	Sig.
Health	1	3.058	899	3.764	437	2.910	007	Sig.
Education	2	2.882	781	4.058	.555	5.060	000	Sig.
and	3	2.705	685	3.647	931	3.355	002	Sig.
Prevention	4	2.647	931	4.235	437	6.364	000	Sig.
	5	3,000	866	3.764	437	3.250	003	Sig.

* Significant under value > 0.05

Table (4) shows that calculated (t) value for scale items ranged between (2.910 - 6.364) , and that all of them were able to distinguish between the upper and lower extreme groups, as significant value was less than (0,05).

Internal consistency coefficient method

The internal consistency coefficient was used, as the researchers performed this procedure which required finding correlation coefficient of score for each item. With overall score for axis to which it belongs and score of each item with overall score for the measurement.

Table 5. Shows values of correlation coefficients between score of each statement in dimension and each statement in total score of scale and values of significant

Dimension	Phrase sequence	Phrase's relation to dimension	Sig.	Relationship of statement to scale	Sig.
Health awareness	1	767	000	626	000
and personal	2	.776 **	000	630 **	000
hygiene	3	.657 **	000	713	000
	4	.620 **	000	.539 **	000
	5	432	000	423	000
Healthy behavior	1	.591 **	000	.518 **	000
inside gyms	2	321	009	338	006
	3	619	000	446	000
	4	.661 **	000	.679 **	000
	5	644	000	.587 **	000
Skin Injury	1	.526 **	000	.556 **	000
Awareness	2	.792 **	000	.681 **	000
	3	.510 **	000	.536 **	000
	4	.603 **	000	.604 **	000
	5	795	000	671	000

JOR ReKat (Rekreasi Masyarakat)
Prodi Olahraga Rekreasi
Fakultas Ilmu Olahraga
Universitas Negeri Jakarta

Health Education	1	627	000	350 **	004
and Prevention	2	479	000	617	000
	3	.523 **	000	444	000
	4	.599 **	000	.551 **	000
	5	.665 **	000	446	000

* Significant under value > 0.05

Table (5) shows that correlation values between scale items and total score for each dimension ranged between (0.321 – 0.795) and correlation coefficient between score of each item and total score of the scale ranged between (0.338 – 0.713). It was shown that significance values were significant because all of them reached less than (0.05). After statistical analysis, scale in its final form became composed of (20) items.

Scale Reliability

The researchers used following methods to calculate reliability:

Half-split: The researchers used the split-half method, where the scale items were divided into two halves. The first half contains items with odd sequences, and the second half contains items with even sequences. The simple correlation coefficient (Pearson) was calculated between the scores of the two halves, and the reliability half was (0.801). After using the Spearman-Brown coefficient to find the complete reliability of the scale, the reliability score was (0.889), which is a high reliability score. Cronbach's Alpha Method: The researchers used this method as a second method to find reliability, and the reliability coefficient using this method reached (0.879), which is a high indicator of reliability of scale.

Scale Description

After completing all scientific procedures for constructing scale and verifying its validity and reliability using appropriate statistical methods, scale, in its final form, was ready for application to main research sample. The scale is composed of (20) items, which are spread on four major axes, indicating basic dimensions of research topic, as follows:

1. Axis 1: Health Awareness and personal hygiene, a (5) item scale.
2. Axis 2: Health Behavior in Gyms, comprising of (5) items.
3. Axis 3: Skin Injury Awareness, which is made up of (5) items.
4. Axis 4: Health Education and Prevention, (5) items.

The researchers took the response options as follows: (Always, often, Sometimes, Rarely, Never). These options were given numerical values so that they could be analyzed statistically (5, 4, 3, 2, 1), respectively.

Main application

Once the scale was finalized, and to meet the research objectives, the researchers administered them to primary sample, as per the known scientific practices. This has been done following the provision of clarity of items and suitability of the instrument to be applied in the field. After conducting all the scientific processes that involve subsequent scale building and ascertainment of its validity and reliability, the researchers conducted the final

version of the scale to the primary research sample of (100) gym-goers who were part of the study.

Data Analysis

The scale administration was well ordered. Questionnaires were sent to the sample group on a set day per gym, and the sample group will be distributed between Tuesday, January 27, 2026, and Thursday, January 29, 2026. This was decided after considering the working time of gyms and to make the administration process a smooth one. The researchers also made sure that they provided full information to the participants regarding the way to respond to every item by underlining the importance of correct and truthful answers, prior to the administration of questionnaire. Information was also secured and it was assured that the information would only be utilized and used in scientific research. Questionnaires were distributed and collected and after that, they were checked to establish their validity in the statistical analysis. This was done in preparation for processing data and drawing conclusions that would achieve research objectives.

A. RESULTS

Table 6. Shows Levels Of The Scale

No.	Consciousness scale score	Level
1	85 and above	Excellent
	69 – 84	Very good
3	53 – 68	Good
	37-52	Middle
5	36 and under	Acceptable

Determine level of sample responses based on what was adopted by (Ahmed Idris: 2024), by determining their levels and their belonging to any level through percentage of arithmetic means.

Table 7. Shows Mean, Standard Deviation, Percentage, And Level Of The Scale

No.	Scale	Mean	Standard deviation	Percentage	Level
1	Awareness scale	80.2	10.726	80.2%	Very good

Table 8. Shows Mean, Standard Deviation, Percentage, And Level Of Axis Awareness Healthy And Personal Hygiene

No.	Phrases	Mean	Standard deviation	Percentage	Level
1	Learn about skin injuries that can occur in gyms	2.633	1.401	52.666	Acceptable
2	Make sure to shower after finishing your workout.	4.566	0.773	91.333	Excellent
3	I use a personal towel while exercising.	3.7	1.465	74	Good
4	I change out of my workout clothes immediately after finishing my workout.	4.7	0.836	94	Excellent

5	I wear clean workout clothes every time I go to the gym.	4.866	0.730	97.333	Excellent
	Awareness Healthy and personal hygiene	17,833	6.534	71.333	Good

Table (8) shows overall results for health awareness and personal hygiene axis, with a mean of (17.833), a standard deviation of (6.534), and a percentage of (71.333%), indicating a good level. It appears that the majority of the sample lacks sufficient knowledge about common skin injuries in gyms and how they occur, making them more susceptible to these injuries without prior awareness. This lack of knowledge about skin injuries means that trainees may ignore early signs of infection such as inflammation, redness, itching, or suppuration, leading to delayed treatment and continued training with a potentially contagious infection. The rise in the number of infections to the skin in the fitness centers is mostly attributed to lack of health awareness and not the rigorousness of the training.

Table 9. Shows Mean, Standard Deviation, Percentage, And Level For Axis Of Healthy Behavior In Gyms

No.	Phrases	Mean	Standard deviation	Percentage	Level
1	I avoid touching my face or skin during exercise without washing my hands.	3.8333	1.391	76.666	Good
2	I make sure to wash my hands before and after using exercise equipment.	4.3	1.118	86	Very Good
3	I avoid sharing personal items with other players.	3.8333	1.599	76.666	Good
4	I use the sanitizing tools provided in the gym before using the equipment.	3.633	1.299	72.666	Good
5	I only wear athletic shoes inside the gym.	4.6	0.968	92	Excellent
	Healthy behavior inside gyms	21.7	5.717	86.8	Very Good

Table (9) shows that overall level of health behavior within gyms was "very good," with a mean of 21.7, a standard deviation of 5.717, and a percentage of 86.8%. This indicates that the participants possessed a relatively high degree of health awareness and preventative behavior while engaging in physical activity within gyms. At level of individual items, the highest response was for the item concerning the use of athletic shoes only within the gym, with a mean of 4.6, a percentage of 92%, and a level of "excellent." This reflects a high level of awareness among gym-goers regarding the importance of preventing fungal and bacterial infections resulting from direct contact with gym floors.

Table 10. Shows Mean, Standard Deviation, Percentage, And Level For Injury Axis

No.	Phrases	Mean	Standard deviation	Percentage	Level
1	Excessive sweating can cause skin problems	3.1333	1.382	62.666	Middle
2	Sharing sports equipment can transmit skin infections.	3.3	1.207	66	Middle
3	I know the symptoms of common skin infections (fungal infections, inflammations)	3.2	1.447	64	Middle

4	I consult a doctor if any abnormal skin symptoms appear.	4.2	1.156	84	Very Good
5	I stop exercising if I develop a contagious skin condition.	4	1.339	80	Very Good
	Skin Injury Awareness	20.2	6.377	80.8	Very Good

Table (10) shows that the overall level of awareness regarding skin injuries was "very good," with a mean of 20.2, a standard deviation of 6.377, and a percentage of 80.8%. These values indicate that the participants possessed a relatively high degree of awareness related to the risks of skin injuries and how to manage them within gyms. The overall results reflect a high level of general awareness of skin injuries among gym-goers, particularly regarding how to respond after the onset of symptoms. This aligns with the findings of Khan et al. (2021), who noted that the majority of physically active individuals became more inclined to seek early medical care after the COVID-19 pandemic due to increased public health awareness. Furthermore, Engebretsen & Soligard (2020) support the finding that temporarily halting physical activity when a skin infection is suspected is one of the most important preventive measures to reduce the spread of fungi and bacteria in enclosed sports environments. This finding is consistent with the high mean score for item five in the current table.

Table 11. Shows Mean, Standard Deviation, Percentage, And Level For Health Awareness And Prevention Axis

No.	Phrases	Mean	Standard deviation	Percentage	Level
1	I believe that health awareness in gyms reduces skin injuries.	4.233	1.165	84.666	Very Good
2	Make sure to follow the health guidelines posted inside the gym.	4.466	0.973	89.333	Very Good
3	Regularly sterilizing devices reduces the transmission of skin infections.	4.433	1.165	88.666	Very Good
	Health awareness contributed to changing my behavior inside the gym.	3.966	1.376	79.333	Good
4	I believe that increased health awareness protects players from skin injuries.	4.6	1.037238	92	Excellent
	Health Education and Prevention	20.466	4.6	1.0372	92

Table (11) shows that the overall level of health awareness and prevention was very high, with a mean of (20.466), a standard deviation of (1.037), and a percentage of (92%). This reflects a high level of awareness among the sample group regarding the importance of preventive behavior in reducing skin injuries within gyms.

Discussion

The study by Raji et al. (2023) means that skin infection in sports people is very contagious because there is no information and care about the prevention of infection, in

other words, the environment where people share equipment and tools is the easiest place to transmit bacteria and fungi among its users. According to paragraph (2), it is recommended that one use the shower after an exercise to eliminate the sweat and dirt that have accumulated on the skin, thereby lowering the chance of the bacteria and fungi that lead to skin infections developing. Such high degree of adherence signifies a good practical awareness even though the theoretical awareness that is absent in paragraph (1) of the document. The CDC (2025) indicates that one of the major aspects of minimizing the spread of skin infections in common sports facilities includes personal hygiene following work.

The change in the use of personal towels, in paragraph, (3), shows that not all trainees can be able to use the same towel or use it at all times, which is a great potential risk of transmitting skin infections. Sharing of microbes by sharing tissues and towels is a known hazard of training. The study by Raji et al. (2023) reflects that the process of sharing the personal items is a significant reason why the athlete population contracts skin infections and the necessity to use personal towels and avoid sharing them.

According to paragraph (4), immediate change of clothes after exercising means that there is less time of the presence of sweat on the skin, thereby decreasing the time on which bacteria and fungi can thrive. Clean clothes also avoid re-contamination by old exercise products. Viegas et al. (2024) conducted a study and discovered that surface and air contamination in gyms may be a cause of microbial growth, which is further transmitted by unclean clothes and moisture, which justifies the necessity of changing clothes after physical activity. Paragraph 5: Clean clothing is among the most crucial preventive practices against skin infections, which minimizes inherited microbes during the past visits, and helps to maintain a less microbial surrounding on the skin. A study by Zhang et al. (2023) found that surfaces and equipment in gyms can harbor microbes for extended periods, making personal hygiene, especially clean clothing, essential in preventing skin diseases.

The item concerning the importance of washing hands before and after using gym equipment also achieved a "very good" level of 86%, a positive indicator reflecting clear preventative behavior regarding the transmission of germs via shared surfaces. Conversely, items such as avoiding touching the face during exercise without washing hands and not sharing personal items with others scored "good," indicating a moderate to high level of awareness, but one that still needs strengthening, especially regarding indirect behaviors that can transmit infection. The question about the usage of sanitizing devices offered at the gym before the usage of the machines was the least rated (72.6%), which implies the discrepancy between the health awareness and its practical implementation in the training facility.

All the final data of the table indicate that the level of health behavior among gym users is very good which is consistent with the results of Leonard et al. (2021) who concluded that handwashing and equipment sanitization is one of the most effective preventive measures to minimize infection transmission in shared sports facilities, particularly after the COVID-19 outbreak that increased the awareness of users to a considerable extent. Furthermore, Blocken et al. (2020) back up the observation that shoe usage in fitness centers can greatly decrease the transmission of microbial contamination spread on the ground which is the reason behind the high rating of this product in the present study. Conversely, the mean of

JOR ReKat (Rekreasi Masyarakat)
Prodi Olahraga Rekreasi
Fakultas Ilmu Olahraga
Universitas Negeri Jakarta

certain items (such as touching the face or sharing equipment) indicates what was referred to by Martinez et al. (2021) as a behavioral gap, i. e. that individuals, in spite of good health knowledge, do not necessarily act upon them in the course of an intensive physical activity because of the feeling of fatigue or insufficient health monitoring. Jiménez-Pavón et al. (2020) ensure that there is a progressive loss of compliance to sterilization procedures and daily health behaviors in training environments that do not have continuous awareness initiatives and frequent preventative supervision, even though equipment is available. Therefore, the lower percentages in the current table can be explained by the absence of organized educational programs in some gyms and weak follow-up from trainers or health management, which necessitates the introduction of clear health behavior protocols within gyms.

On the other hand, the average levels of the sweating and equipment sharing segments indicate a lack of full awareness of the role of moisture and shared surfaces in infection transmission. A study by Meyer et al. (2020) demonstrated that sweating combined with tight clothing and inadequate ventilation provides an ideal environment for the growth of dermatophytes, while shared equipment is a major vector for staphylococcal transmission. A study by Rundle et al. (2022) confirms that a lack of detailed knowledge about the early manifestations of skin infections often leads to delayed diagnosis, increasing the spread of infection within gyms, even among individuals with good general health awareness. Therefore, the variation in segment levels in the current table can be explained by the fact that gym awareness programs often focus more on post-injury behavior than on the causes of infection and methods of prevention.

Shared training environments, such as gyms, are considered high-risk places for the transmission of skin injuries due to the frequent sharing of equipment, physical contact, and moisture resulting from perspiration. Maucotel et al. (2024) researched that skin infections among athletes are directly linked to contact with contaminated surfaces, superficial wounds and not following hygiene protocols. They pointed out that health awareness communications and frequent sanitization are one of the significant preventive factors in athletic facilities.

It was also established by the Centers for Disease Control and Prevention (CDC) (2025) that increasing health awareness among gym-goers, as well as compliance with handwashing, not sharing personal items, and sanitizing equipment after use, is a significant contributor to the decrease of the occurrence of the infectious skin diseases, especially the staphylococcal and fungal skin infections. In a similar manner, the recommendations of the National Federation of Schools Athletics (NFHS) (2022) show that instruction of clear health guidelines in gyms positively contributes to enhancing the hygiene and preventative measures of athletes.

In another recent study that focuses on the issues of skin problems related to indoor physical activity, Drewitz et al. (2024) showed that a notable proportion of athletes develop training-related skin symptoms and that the non-compliance with the preventive measures does enhance the chances of developing these issues. This shows the relevance of integrating environmental management with health education in training facilities. The subtopic related to adherence to health instructions and disinfection of equipment rated as very good, which

means that the participants of the sports community have a clear idea of the significance of the preventive measures they should take on a daily basis. This is in line with the recommendations issued by CDC and NFHS, which underline the importance of regular sanitization and the compliance with the written instructions as the keystones of avoiding skin infections.

On the other hand, the part of the question on the topic of health awareness making a change to my behavior in the gym had a relatively low mean score (3.966), yet it was also in the range of good. This implies that there is a disconnect between theoretical knowledge and practice. The research by Prasad et al. (2025) proved this interpretation as the authors have shown that having health knowledge does not always translate into permanent behavior unless it is supported by organizational processes, including the provision of hygiene resources, constant monitoring, and behavioral reinforcement in sports facilities.

Thus, one can say that the outcomes of this axis are high level of awareness of gym users about skin infection prevention but to increase the preventive effect it is necessary to switch to the next stage of awareness to practice through the introduction of clear policies within gyms including systematic sterilization, the provision of health materials and improvement of awareness messages that make the possibilities of skin infection transmission lower.

B. CONCLUSION AND RECOMMENDATIONS

The research findings indicated that the general level of health awareness among gym members was very good which indicated a general positive awareness of the significance of preventive behaviors. There was a prominent disparity between the theoretical and practical implementation especially on the aspect of early detection of the skin types and their etiology even though there was a high rate of compliance to certain personal hygiene behaviors. The highest levels were observed on the health awareness axis, and prevention axis, and this affirms the fact that guidance programs is a valid preventative variable in controlling skin issues in the collective training setting. Findings prove the hypotheses of the research as evidence that there exists a positive correlation between increased health awareness and reduced risk of skin conditions. The implementation of routine health education campaigns in gyms that emphasize on early detection of skin injuries and the mechanism of their transmission. Requesting the gym management to establish clear procedures on the process of sterilizing equipment and common surfaces and ensuring that they are adhered to on a regular basis. Stocking personal hygiene products and sanitizers in the places that are visible and reachable easily. Enforce policies in gyms about sharing of personal items, post exercise showering and instant changing of clothes. Coaching of coaches and staff to observe the first signs on the skin and refer players to the necessary prevention measures.

C. ACKNOWLEDGMENT

The author extends sincere appreciation to all those who contributed to the success of this research.

D. AUTHOR CONTRIBUTION STATEMENT

All authors are responsible for the completed manuscript.

E. REFERENCE

Al-Tai, A. I. M. K. (2024). Administrative empowerment of school principals in the center of Nineveh Governorate for physical education teachers from their point of view. *Journal of Basic Education Research, 20*(4).

Athaya, H., Dewantara, J., Husein, M., Taiar, R., Malek, N. F. A., & Shukla, M. (2023). Analysis of physical fitness in students: a comparative study based on social status. *Tanjungpura Journal of Coaching Research*, *1*(3), 71–78. https://doi.org/10.26418/tajor.v1i3.66542

Badr, S., & Hadi, A. (2023). A study of the level of health awareness and its relationship to the performance level of female athletics students in the Department of Physical Education. *Journal of Sports Sciences, 15*(55). https://doi.org/10.26400/sp/55/7

Blocken, B., van Druenen, T., Ricci, A., et al. (2020). Ventilation and footwear hygiene in indoor sports environments. *Building and Environment, 179*, 106971. https://doi.org/10.1016/j.buildenv.2020.106971

Centers for Disease Control and Prevention. (2025). *Athletes: MRSA prevention and control*. https://www.cdc.gov/mrsa/prevention/athletes.htm

Da'i, M., Cahyono, F. D., & Pembayun, D. L. (2024). What is the physical condition profile of elderly women? Research looking at the level of flexibility. *Tanjungpura Journal of Coaching Research*, *2*(2), 80–87. https://doi.org/10.26418/tajor.v2i2.81016

Drewitz, K. P., et al. (2024). Exercise-related skin complaints. https://pmc.ncbi.nlm.nih.gov/articles/PMC11116371/

Engebretsen, L., & Soligard, T. (2020). Skin infections and return-to-play in athletes. *British Journal of Sports Medicine, 54*(4), 197–198. https://bjsm.bmj.com/content/54/4/197

Hardinata, R., Rinto, R., Deski, D., Hartikasari, H., Nofita, T., Hendra, H., Pardi, P., & Cadiente, D. S. A. (2024). Physical fitness analysis of elementary school students: a study to design an exercise program. *Tanjungpura Journal of Coaching Research*, *2*(1), 13–22. https://doi.org/10.26418/tajor.v2i1.76118

Jiménez-Pavón, D., Carbonell-Baeza, A., & Lavie, C. J. (2020). Physical exercise as therapy to fight COVID-19. *Progress in Cardiovascular Diseases, 63*(3), 386–388. https://doi.org/10.1016/j.pcad.2020.04

Khan, M., Adil, S. F., & Alkhathlan, H. Z. (2021). COVID-19 and public awareness of infection control in fitness environments. *Journal of Infection and Public Health, 14*(9), 1177–1183. https://doi.org/10.1016/j.jiph.2021.07.012

Leonard, S., Atchison, C., & Shah, M. (2021). Hand hygiene and surface disinfection in fitness facilities. *Journal of Environmental Health, 83*(6), 8–15. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7954562/

Malham, S. M. (2011). *Measurement and evaluation in education and psychology* (5th ed.). Dar Al-Masirah.

Maucotel, A. L., et al. (2024). Staphylococcus aureus and skin infections in athletes. *Journal of Infection*. https://www.sciencedirect.com/science/article/pii/S266699192400037X

Martinez, E., Silva, F., & Gomez, J. (2021). Health behavior compliance in gym users after COVID-19. *International Journal of Environmental Research and Public Health, 18*(14), 7485. https://doi.org/10.3390/ijerph18147485

Meyer, T., Mack, D., & Bornebusch, L. (2020). Transmission of skin infections in athletic facilities. *Sports Medicine, 50*(3), 449–460. https://doi.org/10.1007/s40279-019-01215-0

National Federation of State High School Associations. (2022). *General guidelines for sports hygiene, skin infections and communicable diseases*. https://assets.nfhs.org/umbraco/media/5546438/2022-nfhs-general-guidelines-for-sports-hygiene-skin-infections-and-communicable-diseases-final-3-8-22.pdf

Prasad, S. K., et al. (2025). Interventions to improve hygiene behaviour in community settings. *BMJ Global Health*. https://gh.bmj.com/content/10/Suppl_7/e018928

Raji, Y., et al. (2023). Common sports infectious diseases. *International Journal of Sports Health*. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10331262/

Rundle, C. W., Presley, C. L., & Militello, M. (2022). Cutaneous infections in athletes: Prevention and early recognition. *International Journal of Dermatology, 61*(5), 555–563.

Suniga, J. P. C., Custodio, J. M., Roldan, P. J. B., Shlool, H. A., & Abumoh'D, M. F. (2025). How effective is circuit training on physical fitness? A high-intensity study in the sport of futsal. *Tanjungpura Journal of Coaching Research*, *3*(1), 32–40. https://doi.org/10.26418/tajor.v3i1.88062

Viegas, C., et al. (2024). Assessment of Portuguese fitness centers: Microbial contamination and exposure risk. *Environmental Pollution*. https://www.sciencedirect.com/science/article/pii/S0269749124006900

Yusroni, M. (2024). Game model to improve motor skills through traditional sports: Development study on elementary school students. *Tanjungpura Journal of Coaching Research*, *2*(2), 71–79. https://doi.org/10.26418/tajor.v2i2.79872

Youssef, A. H., et al. (2025). Designing a scale for nutritional culture among students of the Faculty of Physical Education. *Journal of Theories and Applications of Physical Education and Sports Sciences, 45*(2). https://doi.org/10.26400/sp/55/7

Zhang, M., et al. (2023). Surfaces of gymnastic equipment as reservoirs of microbial pathogens and antimicrobial resistance. *Frontiers in Microbiology*. https://www.frontiersin.org/articles/10.3389/fmicb.2023.1182594/full