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AWARENESS, ATTITUDE, AND PRACTICES ON HYDRATION AND FLUID REPLACEMENT AMONG COACHES OF VARSITY ATHLETES

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Abstract

The search for high-performing athletes and preventing heat-related illnesses, hydration, and fluid replacement play a vital role in recruiting athletes with qualifications essential for competition. This study investigated the Awareness, Attitude, and Practices on Hydration and Fluid Replacement among Coaches of Varsity Athletes of Visayas State University. This study utilized descriptive design, and data were gathered from 182 respondents using a modified Knowledge, Attitude, and Practices (KPAP) survey questionnaire. The study's findings revealed that coaches were aware of hydration and fluid replacement. Coaches possess a strong attitude in emphasizing and ensuring athletes understand the importance of hydration and fluid replacement. The study results also revealed that coaches' hydration and fluid replacement practices on athletes were aligned with the standard practices. Coaches did not fail to advise, remind, and teach athletes to stay hydrated before, during, and after the competition. The study's findings corresponded to the Theory of Exercise Hydration Science by Bob Murray, which discussed the importance of hydration in obtaining athletes' peak performance and how it works to prevent heat-related illnesses due to dehydration. Results of the study will be the basis for the proposed program for coaches and athletes on hydration and fluid replacement.

Keywords**:** Hydration; Fluid Replacement; Coaches; Varsity Athletes

INTRODUCTION

Water is an essential element in keeping an individual alive second to oxygen. It plays a vital role in cardiovascular function, like pumping blood and transporting nutrients to different parts of the body. It lowers body temperature that goes beyond the normal body heat through the excretion of sweat. Water also assists in classifying food nutrients into carbohydrates, proteins, lipids, and the removal of waste products through the excretion of urine and feces (Sawka and Coyle, 1999). Water loss can be sensible or insensible. Lost fluid through sweating, blood, urination, diarrhea, and vomiting are examples of sensible fluid loss resulting from dehydration. On the other hand, insensible water loss is the

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dissipation of fluid from the respiratory tract and diffusion of moisture through sweat and feces (Lawson et al. 2007).

For athletes, 6-10% of body mass loss through sweating can lead to dehydration. Hydration and fluid replacement plays a vital role in achieving and maintaining athletes' peak performance in the whole duration of the competition and prevents heat-related illnesses. Hydration is the right amount of fluids taken before, during competition, training, and after exercise to replace the water loss while maintaining fluid balance and immediate recovery. On the other hand, fluid replacement refers to any fluid taken before, during, and after an activity to bring back the water level to normal and prevent heat-related illnesses, and for athletes to reach their peak performance. The gradual decrease of water in athletes as little as 2% reduced physical performance, such as reduced endurance, increased fatigue, altered thermoregulatory capability (body temperature), and reduced motivation and awareness. Hydration and fluid replacement significantly impact athletes' nutrition for peak performance (Jeukendrup et al., 2005; Murray, 2007; Montain et al., 2008; Cheuvront et al., 2003).

According to National Athletic Trainers' Association (NATA) and American College Sports Medicine (ACSM), athletes should strive for "0% dehydration" and "drink as much as tolerable" before, during, and after exercise or activity. Inappropriate drinking behaviors in drinking water and lacked information on hydration lead to the deficit in the performance of athletes during prolonged training or competition. NATA and ACSM recommend that athletes must consume 503ml-991ml of fluid 2-3 hours before the competition, and 207ml-296ml of fluid with sodium and carbohydrates (sugar) 20-30 minutes before the event with a duration of one (1) hour (Casa et al., 2000, Convertino, et al., 1996, Jonnalagadda, et al. 2001, Rosebloom and Skinner. 2002).

Nevertheless, existing data disclosed that athletes experienced dehydration during training. The study conducted by Cuerdo and Diaz (2017) among softball athletes after profiling showed that the athletes fall short (1.84+0.87)L/day on the required daily intake of 2.2L/day. The result showed that the athletes were dehydrated, which affects their performance. In Visayas State University, based on the data provided by the University's Hospital, there were athletes diagnosed of sports injuries related to dehydration for the years 2016 and 2017 (Zafico, J., 2017, personal communication). According to Dr. Zafico, varsity athletes should be educated about the importance of hydration and fluid replacement and players of the intramural games and inter-dormitory sports activities to prevent dehydration and heat-related injuries (VSU Hospital, 2017).

As a central member of the team with regular contact with athletes, coaches are responsible for advising athletes' nutrition practice to produce competitive athletes. Student-athletes usually seek advice from coaches, physical educator, and trainers on nutrition. Coaches play a significant role in the dissemination of information, especially on hydration and fluid replacement. This is to prevent dehydration that may result in syncope (fainting),

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heat exhaustion, and extreme cases of heatstroke due to 2% body mass loss during exercise or activity (Sawka et al., 2007; Casa et al., 2000, Dunn et al., 2001).

However, in the study of Geijer et al. (2009), almost half of the coaches did not know hydration and fluid replacement. Cockburn et al. (2014) also revealed that coaches advised their athletes even if they did not have sufficient knowledge of nutrition. Coaches did not know hydration and fluid replacement would lower not only the performance of his/her athletes but also the risk the lives of the athletes that can even lead to their death. Redwood et al. (2016) also revealed that coaches gave vague advice to their athletes about fluid replacement. These coaches were seemingly unaware that the athletes become dehydrated even in the cold temperature. The deficit in awareness is possibly due to the low number of coaches who received formal training in fluid hydration. It is important to note that coaches are figures of authority and take on the roles of a teacher, counselor, or "substitute parent." Some acted as confidants, shoulder to lean on for athlete's emotions. Athletes looked up coaches as role models and often sources of information, knowledge and influenced the behavior, attitude, physical and psychological health, mainly eating and weight loss habits resulting in the participation of athletic competition (Perna et al., 1996). Thus, coaches should have sufficient knowledge on hydration, attitude, and practices to have the advantage of developing competitive athletes and can execute their best by maintaining water balance (Sawka et al., 2007; Casa et al., 2000, Dunn et al., 2001).

Thus, this study determined the awareness, attitude, and practices among coaches of varsity athletes of Visayas State University on hydration and fluid replacement.

METHODS

2.1. Research Design

This research utilized descriptive design (Borg & Gall, 1989) to determine the awareness, attitude, and practices on hydration and fluid replacement among coaches of varsity athletes and athletes' feedback on their coaches of Visayas State University Visca, Baybay City, Leyte.

2.2. Research Respondents

The respondents of this study were composed of twenty-nine (29) coaches, one of which is a holder of Doctor in Philosophy, ten (10) master's degree holders, fourteen (14) bachelor degree holders, and four (4) students who are requested to coach as they possessed exceptional skills in coaching. Other respondents of this study were 153 athletes of different sporting events in their second year to fourth year (2nd-4th) level employing the total population.

2.3. Research Locale

The study was conducted at Visayas State University-Baybay Campus, situated in Barangay Pangasugan, 8 km north of Baybay, Leyte, and 34 km south Ormoc City. It is accessible from both directions because the national road cuts across the University campus.

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The campus has a land area of 1,099 hectares. Visayas State University has 193 buildings composed of academic departments, research and training centers, staff and student housing facilities, and other vital structures.

2.4. Research Instrument

A modified Knowledge Attitude and Practices (KAP) standardized survey questionnaire was utilized to elicit information from the respondents on hydration and fluid replacement.

The tables below show the scores, description, and interpretation of the respondents' awareness, attitude, and practices on hydration and fluid replacement.

Table 1 Score ranges, description, and interpretation of the coaches awareness on hydration and fluid replacement

Score	Description	Interpretation
3.26-4.00	Fully Aware	Coaches had 91-100% awareness of hydration and fluid replacement
2.51-3.25	Aware	Coaches had 51-90% awareness of hydration and fluid replacement
1.00-1.75	Not Aware	Coaches had 11-50% awareness of hydration and fluid replacement
3.26-4.00	Fully Not Aware	Coaches had 0-10% awareness of hydration and fluid replacement

Table 2 Score ranges, description, and interpretation of the coaches knowledge on hydration and fluid replacement

Score	Description	Interpretation
4.21-5.00	Strongly Agree	Coaches had a 91-100% positive attitude in emphasizing the importance of hydration and fluid replacement
3.41-4.20	Agree	Coaches had a 71-90% positive attitude in emphasizing the importance of hydration and fluid replacement
2.61-3.40	Undecided	Coaches had a 41-70% positive attitude in emphasizing the importance of hydration and fluid replacement
1.81- 2.60	Disagree	Coaches had a 21-40% positive attitude in emphasizing the importance of hydration and fluid replacement
1.00-1.80	Strongly Disagree	Coaches had a 0-20% positive attitude in emphasizing the importance of hydration and fluid replacement

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Table 3 Score ranges, description, and interpretation of the coaches practices on hydration and fluid replacement

Score	Description	Interpretation
1.45-2.00	YES	Coaches hydration and fluid replacement practices on athletes had 51-100% alignment with the standard practices
1.00-1.44	NO	Coaches hydration and fluid replacement practices on athletes had 0-50% alignment with the standard practices

Table 4 Score ranges, description, and interpretation of the athletes' feedback on coaches' awareness, attitudes, and practices on hydration and fluid replacement.

Score	Description	Interpretation
1.45-2.00	YES	Coaches had 51-100% awareness, attitudes, and practices on hydration and fluid replacement based on athletes feedback
1.00-1.44	NO	Coaches had 0-50% awareness, attitudes, and practices on hydration and fluid replacement based on athletes feedback

2.5 Ethical Considerations

This study observed all ethical issues related to human rights as well as the national rules and regulations. The main ethical principles in conducting this research study were beneficence /non-maleficence, respect for persons, and confidentiality.

2.6 Data Gathering Procedure

Data collection was conducted after obtaining permission from the Visayas State University President and Visayas State University Head of Medical Services. A letter for the respondents was included in the survey questionnaire asking permission to gather information from the respondents about the study's objectives. Data gathered went through a process of analyzation.

2.7 Data Analysis

The data were collated, tabulated, organized, and treated to come with the needed summary of tables which served as bases in answering stated specific problems. Simple frequency count and weighted mean were calculated and were presented in tables.

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RESULTS AND DISCUSSIONS

The awareness of coaches on hydration is vital in educating the athletes on the benefits of hydration and fluid replacement and imposing strict hydration guidelines about athletic performance, and preventing heat-related injuries during competitions. Table 5 illustrates the awareness of coaches on hydration and fluid replacement.

Table 5 Coaches' Awareness on Hydration and Fluid Replacement

Statement	Wx	Descript
1. Athletes should drink 503-592 ml of water before the competition.	2.86	A
2. Water loss affects athlete's performance.	3.69	FA
3. Fainting and muscle cramps are signs of dehydration.	3.31	FA
4. Water availability is important during practices and games.	3.83	FA
5. Athletes should drink 207-296 ml of water 20-30 minutes before the game.	2.66	A
6. Acclimatization plays a big role in athlete's performance.	3.31	FA
7. Cognitive functions are affected by water loss.	2.97	A
8. Sweating lowers body temperature.	2.90	A
9. One percent of water loss affects cardiovascular function.	2.52	A
10. Sports drinks boost athlete's performance.	3.07	A
11. Thirst is the best indicator of dehydration.	3.24	A
12. Fluid replacement after the activity is necessary.	3.48	FA
13. Environment affects athlete's performance.	3.62	FA
14. Monitoring athlete's activity lessens injury.	3.59	FA
15. Athletes should bring water container/tumbler during practices and games are necessary.	3.66	FA
16. Salt intake influences water intake.	2.93	A
17. Athletes lose 6-10% body mass through sweating.	2.59	A
18. Milk base drinks restore muscle strength	2.86	A
19. Weighing athletes before and after the activity determines fluid to be taken	2.38	SA
20. Warm environment can cause heat related injuries	3.24	A
21. Too much water intake cause overhydration	2.76	A
22. Coaches influences athletes more than parents do	3.10	A
23. Drinking coffee can lead to dehydration	2.66	A
24. Two percent body mass loss affects athlete's performance	2.72	A
25. Athletes should consume 237-473 ml of water to regain water balance	2.76	A
Total	**76.69**	

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Weighted Mean	**3.07**	**A**

Legend: 3.26-4.00 Fully Aware, 2.51-3.25 Aware, 1.76-2.50 Slightly Aware, 1.00-1.75 Not Aware

Based on the tabulated result on the coaches' awareness of hydration and fluid replacement, it has a weighted mean of 3.07, showed that 29 coaches were aware of the benefits and effects of dehydration in the performance of athletes. On the other hand, item number 19, with a weighted mean of 2.38, showed that coaches were slightly aware of the importance of weighing athletes before and after the game to determine the exact amount of fluid consumed to regain and maintain water balance in athletes.

The result implies that Visayas State University (VSU) coaches have enough awareness on hydration and fluid replacement. However, because they influence young athletes, the level of awareness should be higher to avoid untoward incidents like syncope, poor execution of skills due to dehydration, and the benefit to help athletes to reach their peak performance during competitions. Maintaining fluid balance in athletes is vital during the day of competition and in preparation for the next day's activity.

The study results are contrary to Redwood et al. (2016) findings that coaches gave vague advice to their athletes about fluid replacement and were seemingly unaware that they became dehydrated.

For coaches to enhance awareness on hydration and fluid replacement, the administrator may set aside funds for hydration and fluid replacement seminars with a sports medicine specialist or expert speakers from the Philippine Olympic Committee, Philippine Sports Commission.

As a central member of a team, coaches have control over their players; hence, they must discuss and impose in athletes the importance of hydration and fluid replacement and its benefits concerning physical performance, especially in outdoor games/competitions. Table 6 explains the details of the discussion.

Table 6 Coaches Attitude on Hydration and Fluid Replacement

Statement	Wx	Description
1. Athletes should drink 503-592 ml of water to be well hydrated 20-30 minutes before the competition.	4.45	SA
2. Water loss is detrimental to athletes.	4.86	SA
3. Fainting and muscle cramps can be prevented.	4.93	SA
4. Water availability is important during practices and games.	4.72	SA
5. Athletes should drink 207-296 ml of water 20-30 minutes before the game.	4.31	SA
6. Arriving at the venue is an advantage..	4.69	SA

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7. Education on hydration and fluid replacement is essential.	4.76	SA
8. Encourage athletes to drink water to lower body temperature.	4.55	SA
9. Fluid replacement maintains water in the body.	4.45	SA
10. Sports drink better than water.	3.41	A
11. Thirst is the best indicator of dehydration.	4.07	A
12. Fluid replacement after an activity is necessary for the next game.	4.69	SA
13. Games should be played indoor/covered courts or late in the afternoon.	3.83	A
14. Confining athletes in one house is important for monitoring.	4.55	SA
15. Athletes should bring water container/tumbler is a must.	4.79	SA
16. Sodium and potassium content in drink increases water intake.	4.24	SA
17. Athletes should rehydrate with water or sports drink to replenish lost fluid.	4.55	SA
18. Milk base drinks restores muscle strength faster.	3.90	A
19. Weighing athletes before and after the activity determines fluid to be consume.	3.83	A
20. Fluid replacement prevents heat related injuries.	4.59	SA
21. Athletes should not drink too much water.	4.17	A
22. Athletes consider coaches as their parents.	4.45	SA
23. Athletes should not drink caffeinated drinks.	4.14	A
24. Two percent mass loss can be prevented by fluid replacement.	4.14	A
25. Athletes should consume 237-473 ml of water or sports drink to regain water balance after the activity.	4.24	SA
Total	**109.31**	
Weighted Mean	**4.37**	**SA**

Legend: 4.21-5.00 Strongly Agree, 3.41-4.20 Agree, 2.61-3.40 Undecided, 1.81-2.60 Disagree, 1.00-1.80 Strongly Disagree

Table 6 shows that coaches had a strong positive attitude in emphasizing and making sure athletes understood the importance of hydration and fluid replacement based on the weighted mean of 4.37. It is indicated that coaches made it known to athletes the benefits of achieving the peak performance, maintaining the thermoregulation, and preventing heat-related injuries in athletes at the beginning of the training session.

The result implies that coaches possess the attitude of educating and explaining hydration and fluid replacement to athletes to endure a long period of games/exercise conducted outside. This convincing power of coaches could be attributed to the information acquired from websites/internet and books. With the presence of technology, coaches could easily download information on hydration and fluid replacement. Besides coaches, high-end facilities and expert services can help prevent dehydration; a professional dietitian or a

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nutritionist can help monitor athletes' food intake and provide athletes dormitory to keep an eye on their activities.

Since coaches have a strong attitude on hydration and fluid replacement based on the result, they have to upgrade to keep themselves updated on new information and strategies in educating athletes. Dealing with student-athletes is not a joke. It entails an amount of money to address this; the honorarium of coaches must be increased, and there should be a provision of free internet access in the university.

Similarly, Redwood et al. (2016) revealed that coaches' attitudes towards fluid replacement and hydration are very good, facilitating their acceptance and adoption of proper fluid replacement guidelines. Tapping into this positive attitude and implementing workshops, seminars, and on-site promotions should significantly improve the coaches' knowledge.

Coaches who have direct contact with athletes and are considered "parents substitute" advise athletes on hydration and fluid replacement. It is also his/her responsibility to encourage hydration and fluid replacement to be part of athletes' routine before, during, and after every activity. Besides discussing its benefits, coaches also advised other aspects of student-athletes life, such as personal, financial, academic, and extra-curricular activities. Coaches sometimes expound all possibilities just to provided assistance to athletes based on experience. Table 7 shows the practices of coaches on hydration and fluid replacement.

Table 7 Coaches Practices on Hydration and Fluid Replacement

Statement:	NO	YES	Frequency
1. Advise athletes to drink 503-592 ml of water before the competition for hydration.	4	25	1.86
2. Remind athletes about the effect of water loss on performance.	3	26	1.89
3. Remind athletes to be in good shape and well hydrated.	2	27	1.93
4. Remind the team to bring water during practices and games.	1	28	1.96
5. Athletes are allowed to drink 207-296 ml of water 20-30 6 minutes before the game.	3	26	1.89
6. Athletes are allowed to acclimatize at the venue.	4	25	1.86
7. Athletes are given information on the importance of hydration and fluid replacement.	4	25	1.86
8. Encourage athletes to drink water to lower body temperature.	4	25	1.86
9. Educate athletes that fluid replacement maintains water in the body.	4	25	1.86
10. Remind athletes that sports drink is better than water.	9	20	1.68
11. Remind athlete that thirst is not the only indicator of dehydration.	5	24	1.82
12. Remind athletes that is necessary to drink water or sports drink after the activity.	2	27	1.93
13. Suggest games be played indoor/covered courts or late in the afternoon.	9	20	1.68

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14. Advise athletes to stay in one house for monitoring purposes.	4	25	1.86
15. Remind athletes to bring water container/tumbler.	2	27	1.93
16. Advise athletes to take sodium and potassium rich drinks.	9	20	1.68
17. Advise athletes to drink water or sports drink.	2	27	1.93
18. Explains to athletes that milk base drinks restores muscle strength faster.	8	21	1.72
19. Weigh athletes before and after the game.	10	19	1.65
20. Inform athletes on prevention of heat related injuries.	4	25	1.86
21. Advise athletes not drink too much water.	5	24	1.82
22. Athletes admire coaches.	4	25	1.86
23. Advise athletes not to drink caffeinated drinks.	8	21	1.72
24. Ensure athletes replenish the water loss.	3	26	1.89
25. Ensure athletes consume 237-473 ml of water or sports drink after the activity.	5	24	1.82
Total			**45.82**
Frequency			**1.83**

N=29

Legend: 1.45- 2.00 Yes, 1.00-1.44 No

With a frequency of 1.83, this implies that coaches' practice on hydration and fluid replacement on athletes were aligned with the standard practices. Coaches did not fail to advise, remind, and teach athletes to stay hydrated before, during, and after the competition to reach the peak performance. The practice of coaches could be attributed to their lifestyle, where athletes draw their information and other sources of information. Usually, coaches by nature are very health conscious in following hydration and fluid replacement to possess the physique of a healthy, strong, well-disciplined coach to set as an example to athletes.

As central members of the team, coaches have regular contact with athletes; they advise them on nutrition practice to be competitive. Student-athletes usually seek advice from coaches, physical educator, and trainers on nutrition. Both coaches and athletes understand sufficient knowledge on nutrition like eating carbohydrates, fats, proteins, mineral/electrolytes, vitamins, and water as essential components in agility, endurance, reflexes, speed, and strength which enhance athletes' condition and nutrition to obtain athletic success (Juzwiak, 2004; Clark, 1990).

To prevent dehydration in athletes, coaches and the sports department may suggest to the administration to cover the existing venues to avoid dehydration and other heat-related injuries. Accessibility of drinking faucets near the venues could also help athletes' hydration and fluid replacement in outdoor games.

Athletes as the main factor in the evaluation of coaches' qualities in the implementation of hydration and fluid replacement could be determined in the development, performance, and achievement of athletes during competitions. The athletes who are always

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with the coach are the prime source of the evaluation result of whether coaches possess awareness, attitude, and practices on hydration and fluid replacement as manifested during the competition. The study involved 153 athletes in different sporting events. Eighty (80) were males, and 73 were females in their sophomore to senior (2nd-4th) year as members of the varsity program of Visayas State University, Visca Baybay City, Leyte. Table 8 outlines athletes' feedback on their coaches regarding hydration and fluid replacement.

Table 8 Athletes Feedback on Coaches Regarding Hydration and Fluid Replacement

Statement	NO	YES	Frequency
1. Advise athletes to drink 503-592 ml of water before the competition for hydration.	3	150	1.98
2. Remind athletes the effect of water loss in athletes' performance.	3	150	1.98
3. Remind athletes to be in good shape and well hydrated.	3	150	1.98
4. Assign team member to bring water during practices and games	13	140	1.91
5. Athletes are allowed to drink 207-296 ml of water 20-30 minutes before the game.	14	139	1.90
6. Allows athletes to practice at the venue prior to the competitions.	13	140	1.91
7. Coaches review the importance of hydration and fluid replacement.	7	146	1.95
8. Coaches encourage athletes to drink water to lower body temperature during breaks.	4	149	1.97
9. Coaches remind athletes to maintain water balance.	9	144	1.94
10. Coaches inform athletes that sports drink is better than water.	19	134	1.87
11. Coaches remind athletes that thirst is not the only indicator of dehydration.	9	144	1.94
12. Coaches remind athletes to drink water or sports drink after the activity is necessary.	3	150	1.98
13. Coaches suggest games be played indoor/covered courts or late in the afternoon.	12	141	1.92
14. Coaches advise athletes to stay in one house/dormitory for easy monitoring.	7	146	1.95
15. Coaches emphasize to athletes to bring water container/tumbler for hydration purposes.	8	145	1.94
16. Athletes are provided with sodium and potassium rich drink.	6	147	1.96
17. Coaches remind athletes that 1% water loss affects cognitive function.	10	143	1.93
18. Coaches inform athletes that milk base drinks restore muscle strength faster.	14	139	1.90
19. Coaches weigh athletes before and after an activity.	6	147	1.96
20. Coaches remind athletes that fluid replacement prevents heat	53	100	1.65

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related injuries.			
21. Coaches advise athletes not to drink too much water.	6	147	1.96
22. Athletes consider coaches as role model.	4	149	1.97
23. Coaches advise athletes not to drink caffeinated drinks.	3	150	1.98
24. Coaches ensure athletes replenish water loss.	6	147	1.96
25. Coaches ensure athletes consume 237-473ml of water or sports drink after the activity.	4	149	1.97
26. Coaches provide conditioning program for athletes.	5	148	1.96
27. Coaches are knowledgeable of the sports he handle.	8	145	1.94
28. Coaches attend practices.	4	149	1.97
29. Coaches encourage athletes to excel in their chosen sport.	3	150	1.98
30. Coaches conduct evaluation after each game.	3	150	1.98
31. Coaches set guidelines for water replacement to athletes.	3	150	1.98
32. Coaches conduct assessment of athletes' performance.	7	146	1.95
33. Coaches ensures athletes know the rules of the game.	8	145	1.94
34. Coaches replace athletes showing signs of fatigue.	3	150	1.98
35. Coaches request time out for athletes to rest.	48	103	1.66
Total			**67.7**
frequency			**1.93**

N=153

Legend: 1.45- 2.00 Yes, 1.00-1.44 No

Based on the tabulated result with the frequency of 1.93, it is reflected that coaches possess good awareness, attitude, and practices in implementing hydration and fluid replacement on athletes. It is evidently supported by the last Regional State Colleges and Universities Athletic Association Meet medal tally. The university placed second in the overall ranking among 11 SUCs in the Eastern Visayas region. The athletes of Visayas State University (VSU) garnered more medals in team sports. The medical team has not reported on the different stations during games in a week concerning dehydration. This could be attributed to the coaches' practice, attitude, and awareness on hydration and fluid replacement instilled in athletes' minds. To attract more qualified coaches to help maintain or improve players standing in the competition, the administration may also have to do their part, like increase the incentives of athletes and coaches during competition aside from the varsity assistance. Seminar on hydration and fluid replacement among coaches and athletes with a sports medicine specialist or speakers from Philippine Sports Commission and Philippine Olympic Committee.

CONCLUSIONS AND IMPLICATIONS

The study concluded that coaches possess the awareness, attitude, and practices on hydration and fluid replacement. Coaches were aware of and implemented hydration and

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fluid replacement guidelines to obtain athletes' peak performance in competition, prevent heat-related illnesses, and replenish water lost to maintain water balance. The awareness, attitude, and practices on hydration and fluid replacement among varsity athletes are essential elements necessary for the recruitment, development, and producing high quality performing athletes who have superior skills in their respective events.

The study's findings corresponded to the Theory of Exercise Hydration Science by Bob Murray, which discussed the importance of hydration in obtaining athletes' peak performance and how it works to prevent heat-related illnesses due to dehydration.

Results of the study will be the basis for the proposed program for coaches and athletes on hydration and fluid replacement. It may also inform the national government of the need to consider training coaches in the different parts of the country (Artiga et al., 2020).

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