

Inappropriate Behaviors by Sport Coaches in Japan : based on the online survey for coaches licensed by Japan Sport Association

NAKAZAWA Makoto ^{*}, FUNK Daniel ^{**}, KURODA Yusuke ^{*},
YOSHIDA Masayuki ^{***}, YOSHIOKA Naoko ^{*} and IWAMURA Satoshi ^{****}

Abstract

The purpose of this study was to examine how inappropriate behaviors occur and the context behind such behaviors in Japanese sport coaching. A total of 28,547 Japan Sport Association registered coaches were invited to participate in this study using an online survey. Data were collected between September and October, 2019, and 2,611 registered coaches participated in this study (valid response rate of 9.2%). The percentage of four inappropriate behavior seen or heard during the time of sports coaching within the past five years were as follows: Verbal abuse = 59.8%, corporal punishment/hazing = 37.4%, sexual harassment = 29.2%, hindering freedom of career-path choice = 17.6%, and any one of these four = 67.0%. Many sport coaches perceived the context behind the inappropriate behavior in sport coaching was due to the "humanity and personality of a coach", followed by "result oriented approach, triumphalism" and "relationships and environments that are difficult to make a complaint". The decision tree analysis showed that the competition level of athletes being coached, the age of coaches, and the sex were related to seeing and hearing inappropriate behaviors. Furthermore, it was suggested that it is effective to have focused education program/workshop about inappropriate behaviors for coaches to prevent from conducting such behaviors.

Key words: inappropriate behaviors, verbal abuse, sexual harassment, coaches licensed by the Japan Sport Association, decision tree

Introduction

For athletes to be successful, the presence of coaches is essential as athletes need guidance and feedback to master sport. Because of this, the coach-athlete relationship can be considered as the most important relationship that athlete experiences in a sport, especially for a young athlete (Gervis & Dunn, 2004). Athletes spend considerable time with coaches as athletes advance in their sporting ranks (Donnelly, 1997), and coaches will have stronger influences not only in training and competition but also with diet, academics, and social interests (Tomlinson & Yorganci, 1997). Coaches may provide positive influences on athletes such as enhancement of autonomy, competence, and relatedness

(Mageau & Vallerand, 2003). However, various forms of inappropriate behaviors such as physical, sexual, and emotional abuses have been reported (Kirby et al., 2000). Inappropriate behavior among critical relationship like coach-athlete is called 'relational abuse', and it can be critical as this type of relationship is built upon sense of safety, trust, and fulfilment of needs (Crooks & Wolfe, 2007).

Previous studies reveal relational inappropriate behavior occurs among coaches and student-athletes (e.g. Fasting & Brackenridge, 2009; Fejgin & Hanegby, 2001; Rodriguez, 2012; Stirling & Kerr, 2009). Similarly, in Japan, the Japanese Olympic Committee surveyed

* University of Tsukuba

** Temple University, USA

*** Hosei University.

**** Teikyo University

affiliated sports organizations and reported that 11.5% of athletes answered that they experienced either power harassment or sexual harassment, including violence, while they were being coached (Japanese Olympic Committee, 2013). Relatedly, the Japanese Association of University Physical Education and Sports surveyed student-athletes from member universities and reported that, in the past, 20.5% of students experienced corporal punishment during sports club activities (Japanese Association of University Physical Education and Sports, 2013).

Inappropriate behavior by coaches has been investigated from coaches and/or athletes perspective by investigating the context of each case, usually by qualitative research methods, in order to come up with a recurrence prevention measures (e.g., Cantú-Berrueto et al., 2016; Yabe et al., 2019). Others have investigated relational inappropriate behaviors as a social problem perspective to determine if such behavior is occurring consistently between coaches and athletes, mainly by quantitative research methods (e.g. Fasting & Brackenridge, 2009; Stirling & Kerr, 2009).

In this study, we collected data from a social problem between coaches and athletes' perspective using a quantitative research method and tried to examine whether coaches have seen and/or heard inappropriate behaviors by their colleagues and tried to understand the context behind inappropriate behaviors of coaches.

Previous Literature

Types of inappropriate behaviors by coaches

Coaches possess power over athlete. When that power is misused, it can affect athletes negatively both physically and mentally (Stirling & Kerr, 2009). A study by Stirling et al. (2011) systematically analyzed inappropriate behavior by coaches and revealed four forms of inappropriate behaviors: physical abuse, sexual abuse, emotional abuse, and neglect; and, we wanted to proceed with a research to understand the situation in Japan based on these four types of inappropriate behaviors. However, soon after, it was confirmed that hindering freedom of career-path choice (of student-athletes) was another type of inappropriate behavior by the coaches in Japan (Yoshida et al., 1996). Therefore, in addition to the four types of inappropriate behaviors identified by Stirling et al., there was a need for us to understand additional inappropriate behavior in Japan, which would result in a total of five inappropriate behaviors. However, in the process of creating the online

survey, due to the restriction of the number of survey items, we made a decision by reducing the variables as follows.

1. physical abuse: corporate punishment / hazing described in this paper
2. sexual abuse: sexual harassment described in this paper
3. emotional abuse: since it has an adverse effect on emotions, it is considered as verbal abuse in this paper along with neglect because of the number restriction of survey items.
4. neglect: since it has an adverse effect on emotions and is related to the number restriction of survey items, it is referred to as verbal abuse in this paper along with emotional abuse.
5. hindering freedom of career-path choice (as it is)

We examine inappropriate behaviors more specifically in this study, and they are: verbal abuse, corporal punishment/hazing, sexual harassment, and hindering freedom of career-path choice (of student-athletes).

Yelling and shouting at athletes, belittling, humiliating, and name-calling of athletes are often used by coaches. Challenging athletes verbally is a coaching technique to increase performance of athletes (Stirling et al., 2011). However, when such acts by coaches result in negative emotional health of athletes, it is considered as a verbal abuse. Previous research reports that verbal abuse will lower athlete motivation and can result in dropping out from competition (Yabe et al., 2019). This form of inappropriate behavior is the most common emotional abuse reported by athletes (Gervis & Dunn, 2004).

The act of physical contact that causes any distress or discomfort is considered as corporal punishment (United Nations Convention on the Rights of the Child, 2006). The practice of corporal punishment is legally prohibited in many countries. Not only will corporal punishment hurt physically, they can hurt emotionally as well (Feinstein & Mwahombela, 2010).

Ministry of Education, Culture, Sports, Science and Technology (2013) reported that the rate of corporal punishment by coaches at school sports clubs (bukatsu) in Japan was high. Since then, even though this practice is dropping at schools (Tokyo Metropolitan Board of Education, 2020), there is a suggestion that the rate of corporal punishment by coaches at bukatsu dropped due to a shortened time of practice sessions (Uchida, 2019).

Even with less corporal punishment in bukatsu activities, the research showed that some student-athletes who have experienced corporal punishment are tolerating such behavior (Uchida et al., 2020); therefore, corporal punishment still exists, and the concerning situation still remains.

Sexual advances, asking for sexual favor, and any verbal or physical act of a sexual nature are considered as sexual harassment (Wolohan, 1995). Not just in sports, but sexual harassment is committed by males more commonly than by females (Friedrich, 1990). It can happen not only to cross-gender relationships but also among same sex (Sundgot-Borgen et al., 2003). Sexual harassment can result in both physical and psychological problems (Street et al., 2007). Often times, coaches use their power and trust to manipulate their athletes into a sexual relationship (Lumpkin et al., 2003). Conversely, athletes may gain romantic feelings toward their coaches from having a respect and admiring coaches, however, in such cases, coaches need to act professionally and not commit such behavior (Jowett et al., 2005).

When student-athletes choose their career after graduation or deciding which university to attend, a support from their parents and coaches will help them have a positive attitude when facing obstacles (Rodriguez, 2012). There are some coaches who use their power and hinder freedom of career-path choice of student-athletes. According to Yoshida et al., (1996), a support of coaches is important for elite student-athletes in high school clubs to make a career decision (e.g., to decide whether to become professional athlete after graduating from high school or attending university). However, often times, due to a power imbalance between coaches and student-athletes, there is a problem with coaches making a career decision for student-athletes rather than coaches giving student-athletes a support for making their own decision.

It has been pointed out that the influence of the athletic scholarship system, which uses the athletic achievements to advance to higher education, is a factor that increases the power of coaches (Hamada, 2014; Nishiyama, 2014).

It has also been pointed out that many student-athletes think that they cannot continue their studies at high school or university if they do not agree with the coaches' intention (Ichiritsu Amagasaki-kou no taibatsu shidou "younin no kuki" konzetsu toku, 2019). Another case was reported that a suicide tragedy was committed

by a high school student-athlete, because he decided to enroll in an university, which was against his coach's plan (Nakakoji et al., 2020, September 25). Therefore, there is a need for further research, and this study, by collecting such data, may help do that.

Context of inappropriate behaviors

In this study, the authors thought that it was appropriate to grasp the context of how inappropriate behaviors occur by the following four factors.

1. humanity and personality of coach (Swigonski et al., 2014)
2. result oriented approach (Fasting & Brackenridge, 2009; Maier & Laurakis, 1981)
3. relationships and environments that are difficult to make a complaint (Stirling & Kerr, 2009)
4. the coaches training system and curriculum content (Fasting & Brackenridge, 2009)

As for "the coaches training system and curriculum content", the study by Fasting and Brackenridge (2009) examined the problem that can arise from a coaches training system as anti-sexual harassment trainings, and they were not in a part of education program for coaches until recently. Fasting and Brackenridge mentioned that, often times, rather than educating on sexual harassment, such education program tended to focus more on broad themes of gender equity or diversity management. Thus, some coaches may not have realized that they were committing a sexual harassment. Research has shown that when coaches go through a training system, which teaches numerous coaching styles, coaches are more effective at coaching various athletes and less likely to commit inappropriate behaviors (Cassidy et al., 2006).

Currently, some sport associations do have an education program/workshop for each coach about inappropriate behavior in coaching in Japan (Human Rights Watch, 2020).

According to Human Rights Watch (2020), 1. these coaches' education programs/workshops may not contain appropriate education courses, 2. more importantly, over 80% of coaches at the youth level do not have a coaching license, meaning they will never get to go through such programs, 3. therefore, there is a need for establishing a right system of coaching athletes, and having an education program is considered as one of important factors and there is a need to examine the perception of how coached education program is in this study.

When considering coaching styles, there are mainly

two styles of interaction with athletes, and they are controlling style and an autonomy-supportive style (Morales-Sanchez et al., 2020). A coach who prefers controlling style is more likely to commit inappropriate behavior and have negative effects on athletes. They can cause a physical and emotional distress to their athletes by forcing their athletes to obey their coaching (Cantú-Berrueto et al., 2016). On the other hand, a coach who prefers autonomy-supportive style gives some freedom and allows athletes to think by themselves and enhance the positive well-being of athletes. Although coaches understand that allowing freedom to athletes can be more beneficial to athletes, why can't they change their coaching style? According to Swigonski et al. (2014), there are a couple of reasons for having a difficulty to correct coaches' inappropriate behavior, and one of them was due to the personality of coaches. They often try to justify their behavior by normalizing their behavior. For example, a coach would say yelling and screaming at athletes were always being done to promote the aggressiveness of athletes, but in reality, an athlete being screamed at is scared of a coach and has lost motivation to participate in that sport. There is another study that examined the characteristics of coaches who engaged in sexual harassment, and the findings suggested that those who behaved in such a manner could be labelled in one of three characteristics: (1) the flirting-charming coach, (2) the seductive coach, and (3) the authoritarian coach (Fasting & Brackenridge, 2009). Therefore, a personality of a coach can be a reason for inappropriate behaviors.

Traditional theories of coaching were similar to military style and committing to 'winning meant everything' was perceived to be one of characteristics of great coaches (Fasting & Brackenridge, 2009). There is a perception of great coaches being result oriented, and for winning, these great coaches may have committed some inappropriate behaviors, but athletes who flourished under these coaches were mentally and physically strong enough to accept such behaviors from coaches. Most likely, majority of great coaches knew which athletes to behave in that manner. However, when coaches behave similarly to less capable athletes, these athletes will feel victimized caused by distress of coaches' behavior (Besag, 1989). On top of that, such an approach is regarded as one of the risk factors of leading to a sexual harassment (Brackenridge, 2001). According to a research by Maier and Laurakis (1981), result

oriented male coaches tend to possess negative attitudes toward female athletes. Rather than focusing on winning, coaches who give athletes some autonomy and provide supportive behavior will result in increase of athletes' motivation (Mageau & Vallerand, 2003).

Coaches possess power over athletes. The basis of that power can be due to coaches being older, having more knowledge of that sport, authority of being able to make decisions (including reward and punishment), past success in that sport, and sex (mainly for female athletes) (Stirling & Kerr, 2009). Because athletes rely coaches' guidance to be more successful in their sport, coaches gain more power as athletes improve in their sport as coaches' ability to develop is recognized by athletes. Often times, coaches' inappropriate behavior happens because their power exceeds to non-sport related areas of athletes' life. Coaches tell athletes what to eat and how much they should weigh (nutrition), sleeping schedule, and in some case, interpersonal relationships (Tofler et al., 1997; Tomlinson & Yorganci, 1997); therefore, coaches often act as dietician, physiologist, medical doctor, and counsellor. In some cases, elite athletes spend more time with their coaches than their parents. Those athletes being abused and harassed will either have a fearful feeling toward coaches or justify coaches' inappropriate behavior. Because of power of coaches, athletes usually will not be able to report inappropriate behavior to others (Stirling & Kerr, 2009), and often times, sexual harassment by coaches is motivated due to power rather than sexual interest of coaches (Fasting & Brackenridge, 2009).

Four inappropriate behaviors that will be focused for this study are: verbal abuse, corporal punishment/hazing, sexual harassment, and hindering of career choice of athletes. These problematic behaviors by coaches can hurt athletes physically as well as emotionally and will affect athletes' motivation and performances of their sports as well as their daily lives. There are four characteristics focused in this study that is causing coaches to behave that way are: "humanity and personality of a coach", "result oriented approach, triumphalism", "relationships and environments that are difficult to make a complaint", and "the coaches training system, and the curriculum content". By understanding such characteristics, coaches can go through education system that will help reduce such behaviors.

Purpose and method

Purpose of the study

The authors constructed the survey items based on previous studies findings. The following four types of inappropriate behaviors were derived based on Stirling et al. (2011) and Nishiyama (2014).

1. verbal abuse
2. corporal punishment/hazing
3. sexual harassment
4. hindering freedom of career-path choice (of student-athletes)

The potential four causes of inappropriate behaviors based on previous studies (Fasting & Brackenridge, 2009; Maier & Laurakis, 1981; Stirling & Kerr, 2009; Swigonski et al., 2014) were:

1. humanity and personality of coach
2. result oriented approach
3. relationships and environments that are difficult to make a complaint
4. the coaches training system and curriculum content

Then, by conducting an online survey targeting JSPO certified coaches, it becomes possible to grasp the actual inappropriate behaviors happening in Japanese sports coaching.

We thought that this would add the following two points to the findings of previous studies.

1. To obtain knowledge about the actual situation of inappropriate behaviors of coaches in Japan.
2. "Hindering freedom of career-path choice (of student-athletes)" has been qualitatively researched mainly in Japanese sports sociology, but gaining knowledge from quantitative research.

The purposes of this study are:

- to understand to what extent inappropriate behavior in sport coaching has occurred.
- to understand what sport coaches think about the context that lies behind inappropriate behaviors by sport coaches.
- to examine the factors that determine the occurrence of inappropriate behaviors in sport coaches.

Method

A total of 28,547 Japan Sport Association registered coaches were invited to participate in this study using an online survey, and 2,611 registered coaches participated in this study (valid response rate of 9.2%, Appendix 1). The survey was conducted from September 11, 2019 to October 2, 2019.

Instruments

The collected data and the measures used in this study are summarized as follows:

- 1) Presence or absence of inappropriate behavior seen or heard during the time of sport coaching within the past five years (Appendix 2): verbal abuse, corporal punishment/hazing, sexual harassment, and hindering freedom of career-path choice were four inappropriate activities used to characterize inappropriate behaviors.
- 2) Factors recalled as the context of inappropriate behavior: coaches' characteristics of humanity and personality of a coach, result oriented approach, triumphalism, relationships and environments that are difficult to make complaints, and coaches training system and curriculum of training were four factors used to identify the context.
- 3) Characteristics of the survey target (i.e., coaches): sex, age, sport, coach category (Appendix 3), occupation, years of coaching experience, location (of training), frequency of attending training workshop on inappropriate behavior, and confidence of stopping own from inappropriate behavior (Appendix 4).
- 4) Characteristics of the athletes being coached: sex, age, competition level.

Results and Discussion

Characteristics of participants

The followings were characteristics of participants of this study.

Male participants (coaches) consisted of 80.8% (Table 1). Tendency of age groups was in their 40's (33.8%) and 20's (26.4%) (Table 2). Tendency of coaching experience groups was those who have coached for 25 years or more (24.7%) and 10 years or more and less than 15 years (15.2%) (Table.3). The categories of coaches were 5.5% for coach 4, 17.3% for coach 3, 10.9% for coach 2, and 66.2% for coach 1 (Table.4). 32.9% of participants were engaged in their coaching activity in school sports club (Appendix 5).

Presence or absence of inappropriate behavior seen or heard during the time of sport coaching within the past five years

The percentage of four inappropriate behaviors seen or heard during the time of sports coaching within the

Table.1 Sex

	n	%
male	2,102	(80.8)
female	499	(19.2)
	2,601	(100.0)

Table.2 Age

	n	%
Teens	91	(3.5)
20's	243	(9.3)
30's	687	(26.4)
40's	880	(33.8)
50's	532	(20.4)
60's	156	(6.0)
70's	16	(0.6)
80's	0	(0.0)
	2,605	(100.0)

Table.3 Active year(s) as coach

	n	%
Less than 3 years	379	(14.6)
More than 3 years, less than 6 years	291	(11.2)
More than 6 years, less than 10 years	331	(12.8)
More than 10 years, less than 15 years	395	(15.2)
More than 15 years, less than 20 years	316	(12.2)
More than 20 years, less than 25 years	243	(9.4)
More than 25 years	641	(24.7)
	2,596	(100.0)

Table.4 Categories of coaches

	n	%
Coach1	1,694	(66.2)
Coach2	280	(10.9)
Coach3	443	(17.3)
Coach4	142	(5.5)
	2,559	(100.0)

Table.5 Competition level of target athletes

	n	%
International Competition Level	368	(14.3)
National Competition Level	982	(38.2)
Regional Competition Level	310	(12.1)
Prefectural Competition Level	784	(30.5)
Others	127	(4.9)
	2,571	(100.0)

Table.6 Age level of target athletes (multiple answers allowed)

	n	%
Infant (Pre-school aged)	387	(14.9)
Elementary/Primary school aged	1,425	(54.7)
Middle school aged	1,250	(48.0)
High school aged	1,101	(42.3)
College aged	513	(19.7)
23~29 years old	620	(23.8)
30~34 years old	552	(21.2)
35~39 years old	555	(21.3)
40's	649	(24.9)
50's	597	(22.9)
60's	502	(19.3)
over 70's	309	(11.9)

n = 2,605

Table.7 Coaching occasion in school club activity

	n	%
During school club activity	853	(32.9)
Not during school club activity	1,741	(67.1)
	2,594	(100.0)

past five years were as follows: verbal abuse = 59.8%, corporal punishment/hazing = 37.4%, sexual harassment = 29.2%, and hindering freedom of career-path choice = 17.6% (Table.8).

The ratio was higher than that of the previous surveys participated by athletes rather than coaches (Japan Olympic Committee, 2013; Japanese Association of University Physical Education and Sports, 2013). The difference in results may be due to the fact that this study targeted coaches and surveyed what they have seen and heard rather than athletes' experiences.

The results of the survey inferred that inappropriate behavior in sport coaching would have occurred at a fairly high rate. In particular, it is worth noting that the percentage of people who saw or heard inappropriate behavior within the past five years was as high as 67.0% (Table 8) (Appendix 6).

There was a certain level of constant correlation

among four types of inappropriate behaviors to each other, and especially, a strong correlation was found between "verbal abuse" and "corporal punishment/hazing" (0.522, $p < 0.01$). Both verbal abuse and corporal punishment / hazing may be due to the fact that they are easily witnessed by others, and this is in a same line with previous studies (Gondolf et al., 2002; Schumacher & Leonard, 2005), which indicated that the emotional harassment and physical harassment are closely related to each other (Table.9).

Context of inappropriate behaviors in sports coaching

The highest answer among sports coaches in context behind the inappropriate behavior in sport coaching is due to the "humanity and personality of a coach", followed by "result oriented approach, triumphalism" and "relationships and environments that are difficult to make a complaints" (Fig. 1). The percentage of those who attributed it to the "coaches training system and curriculum" was relatively low; however, there was a

Table.8 Inappropriate behaviors seen or heard during the time of sports coaching within the past 5 years

	n	%	
verbal abuse	1,555	(59.8)	n = 2,601
corporal punishment/hazing	975	(37.4)	n = 2,607
sexual harrasment	734	(29.2)	n = 2,514
hindering freedom of career-path choice	457	(17.6)	n = 2,599
Any one or more of the above	1,684	(67.0)	n = 2,514

Table.9 Correlation matrix of inappropriate behaviors seen or heard

	verbal abuse	corporal punishment/hazing	sexual harrasment	hindering freedom of career-path
verbal abuse	1.000			
corporal punishment/hazing	.522**	1.000		
sexual harrasment	.340**	.336**	1.000	
hindering freedom of career-path choice	.282**	.273**	.293**	1.000

Note: **: $p < 0.01$, *: $p < 0.05$

n = 2,514

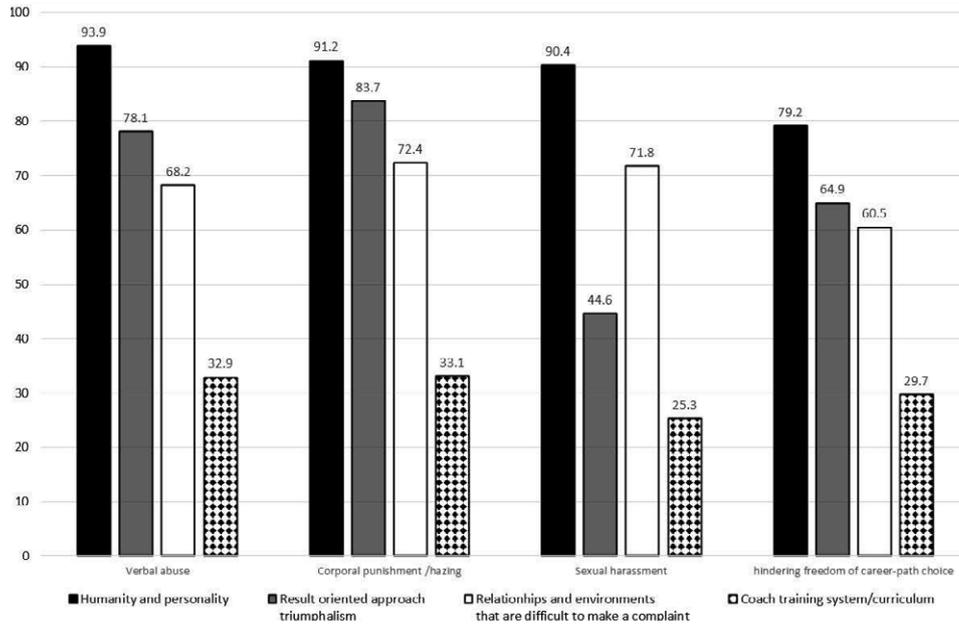


Fig. 1 Context of inappropriate behaviors

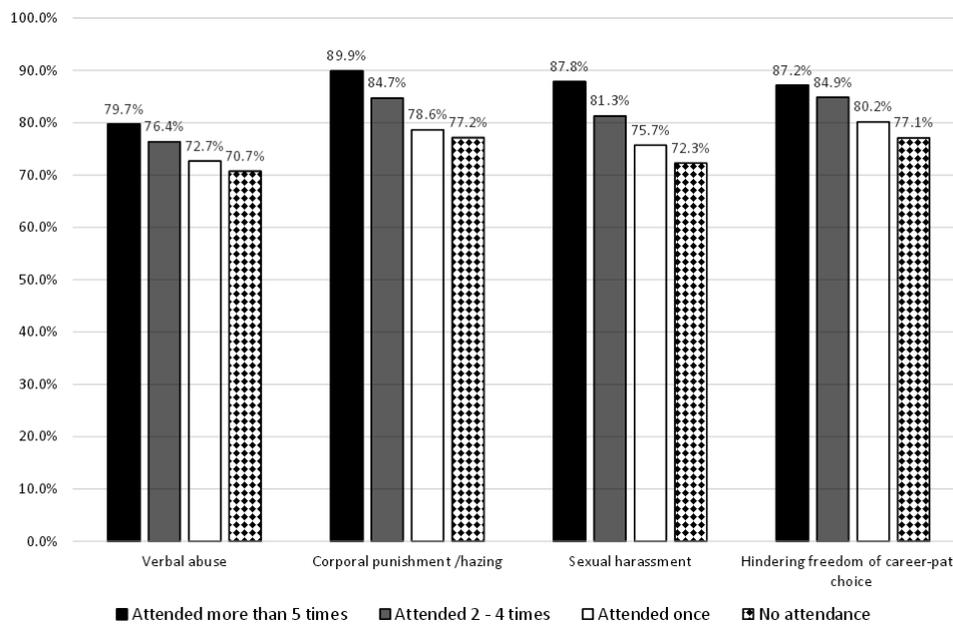


Fig.2 Confidence in dealing with inappropriate behaviors and attendance of workshop for avoiding inappropriate behaviors

strong relationship between the frequency of attending coaches workshops on inappropriate behavior and the confidence that inappropriate behavior can be suppressed (Fig. 2). Therefore, numerous attendances of "coaches training system and curriculum" are thought to be important.

Factors that determine the occurrence of inappropriate behavior in sport coaching

A decision tree analysis was conducted to determine the characteristics of sport coaches who have seen and heard inappropriate behavior in order to examine under

what circumstances inappropriate behavior in sport coaches occurred (Appendix 7). In the decision tree analysis (Classification and Regression Tree: CRT) of this study, "presence or absence of hearing of inappropriate behavior" was adopted as the dependent variable. A group that has seen or heard inappropriate behavior and a group that has not seen or heard inappropriate behavior were independent variables used in between group comparison, where five variables (sex (p <0.01), age (p <0.05), and coach category (p<0.05), location (p <0.01), and competition level of athletes being coached (p <0.01)) showed significant differences (Table.10).

Table.10 Explanatory variables with statistical significance for decision trees

		seen or heard		unseen nor unheard		p
		n	%	n	%	
Sex						<0.05
	female	300	(62.0)	184	(38.0)	
	male	1,368	(68.2)	639	(31.8)	
Age						<0.01
	20's	58	(66.7)	29	(33.3)	
	30's	156	(65.5)	82	(34.5)	
	40's	478	(71.4)	191	(28.6)	
	50's	578	(69.3)	256	(30.7)	
	60's	311	(62.4)	187	(37.6)	
	70's	83	(53.9)	71	(46.1)	
	80's	7	(50.0)	7	(50.0)	
Categories of coaches						<0.05
	Coach1	1,076	(66.1)	552	(33.9)	
	Coach2	168	(62.9)	99	(37.1)	
	Coach3	294	(70.0)	126	(30.0)	
	Coach4	100	(75.2)	33	(24.8)	
Competition level of target athletes						<0.01
	International Competition Level	88	(75.9)	28	(24.1)	
	National Competition Level	525	(70.1)	224	(29.9)	
	Regional Competition Level	223	(74.1)	78	(25.9)	
	Prefectural Competition Level	631	(67.3)	307	(32.7)	
	Others	187	(52.5)	169	(47.5)	
Coaching occasion in school club activity						<0.01
	During school club activity	583	(71.5)	232	(28.5)	
	Not during school club activity	1,084	(64.9)	585	(35.1)	

The results of the decision tree analysis are shown in Fig. 3 (Appendix 8). In this model, the competition level of athletes being coached in the first layer became the first choice and was divided into two groups depending on whether or not it reached the prefectural level. In the group with the competition level of prefecture or higher, the second layer is divided into two groups with the age of the instructor in the 60's and 70's as the boundary. In the third layer, the age of the coach is in the 40's and 50's and others. It was divided into two groups; in the 40's and 50's, and the 4th layer was divided into 2 groups according to the sex of the coach.

When the competition level was higher than a certain level (exceeding the prefectural level), the rate of seeing and hearing inappropriate behavior was high, and when the competition level was above a certain level, the rate of seeing and hearing was high for coaches in their 60's

or younger. Among those in their 60's and younger, the percentage of people in their 40's and 50's who saw and heard inappropriate behavior was the highest. In those in their 40's and 50's, the percentage of men who saw and heard was high.

Conclusion

A survey among sport coaches certified by the Japan Sports Association, which is the fundamental of sport coaches in Japan, produced the following three main findings.

- 1) It is worth noting that 67.0% of the respondents (i.e., coaches) said they have seen or heard something inappropriate in their surroundings within the last five years. Though some research reported inappropriate behavior among sport coaches has decreased (Tokyo Metropolitan Board of Education, 2020), many people think

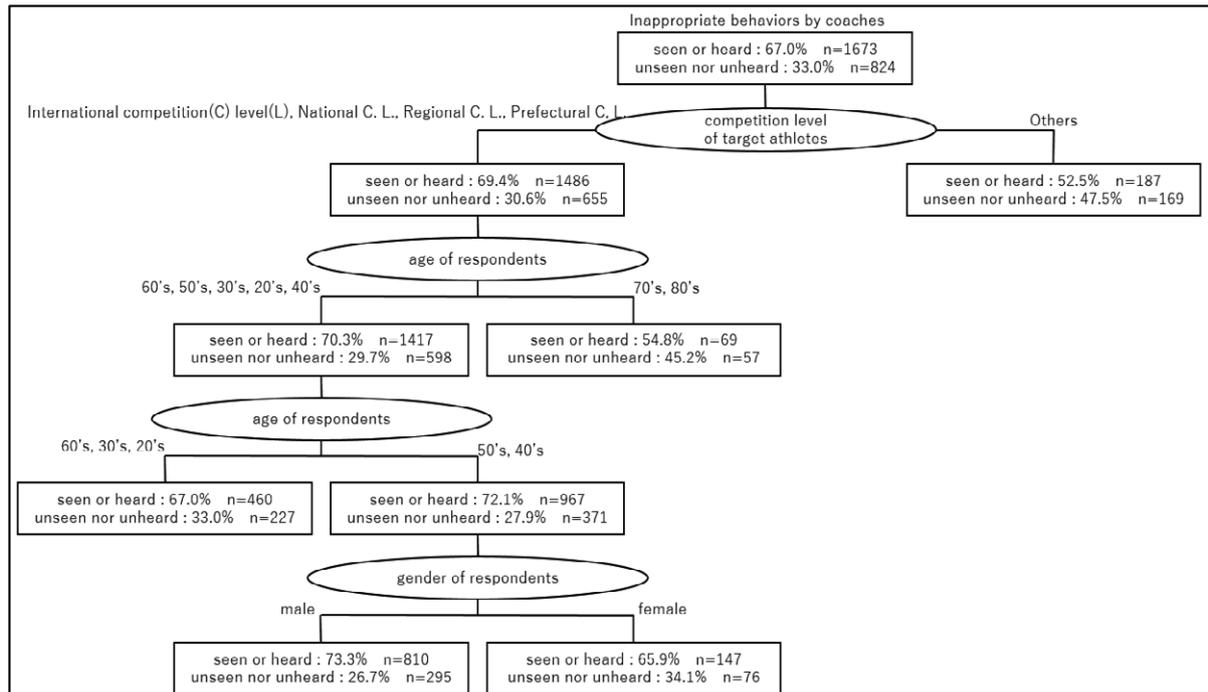


Fig.3 Decision tree for inappropriate behaviors by coaches

the number is just the tip of the iceberg (Sato, 2019). "Verbal abuse", which is considered to be mental violence (Stirling et al., 2011), was the most common, but there was a strong relationship between it and a physical abuse of "corporal punishment / hazing".

- 2) Sport coaches understood that the context of inappropriate behavior was "leader's humanity / personality", "results / victory supremacy", and "relationships and environments that are difficult to complain about damage".
- 3) It was most strongly related to the fact that the level of competition to be instructed was above a certain level for sports coaches to see and hear inappropriate behavior. The age group of the coaches was involved in the competition level above a certain level. The percentage (73.3%) of men in their 40's and 50's who are coaching at the prefectural competition level and above seeing and hearing inappropriate behavior was significantly higher.

On top of three major findings mentioned above, this research was able to make a contribution by gaining insight on coaches hindering freedom of career-path choice. This finding has not been reported in past research as no such data has been obtained in a past study examining relationship between coaches and student-

athletes to the authors' knowledge.

We also feel that gaining data of how coaches feel about gaining knowledge about various inappropriate behaviors was important as data suggested that coaches feel stronger about not committing such behaviors by going through education program/workshop as a coach.

Limitation and Future consideration

In this study, we adopted a survey method and asked sport coaches to examine inappropriate behaviors that they have seen and heard around them. Although the statistical analysis was performed with a low response rate of 9.2%, it was judged that the representativeness of the sample size showed enough statistical power. In addition, since the number of questions in the online survey was limited, it was difficult to collect more detailed information by setting sub-items. Additionally, the question of whether or not the inappropriate behavior seen or heard in this study was not meant to find out the specific number of cases.

The future research can conduct research targeting individual athletes and analyze the macro and micro perspectives in a mixed manner to further clarify the actual situation. Furthermore, a qualitative research that can gain more context, such as situation and background of coaches and athletes, can help understand problems behind inappropriate behaviors more in-depth.

The purpose of this research was to collect basic materials related to research questions, but in the future, questions such as "how to train coaches so as not to fall into consequentialism or victory supremacy", "the way of avoiding or improving relationships and the environment that are difficult to complain of damage", "the way of avoiding or improving relationships and the environment that are difficult to complain", "the curriculum that is effective in deterring inappropriate acts" need to be addressed. It is necessary to carry out more specific problem-solving research.

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Appendix

- 1) Since the valid response rate was low and had only 9.2%, we were concerned with our targeting respondents having a little interest in our research theme. We, then, decided to examine the response rate of other online surveys conducted in the same methodology and on the same respondents (coaches registered by Japan Sport Association). Because we were able to confirm that the range of response rate was between 5.7% and 11.3%, we were convinced that there was no strong relationship between the theme of online surveys and respondents' interest. Furthermore, we compared the distribution of the collected data by sex, age, and category (of coach) of the population with the distribution based on the collected data. Although there were some differences, their distributions were generally the same, and we decided that they represented the population, and, therefore, the analysis was continued.
- 2) In our questionnaire, the question for four types of inappropriate behaviour was set as followings: Please let us know that whether you have seen and

Appendix Comparison between collected data and coaches licensed by Japan Sport Association (JSPO)

		collected data	coaches licensed by JSPO
Sex	male	80.8%	79.0%
	female	19.2%	21.0%
	n	2,601	156,622
Age	Teens	3.5%	0.1%
	20's	9.3%	9.0%
	30's	26.4%	17.8%
	40's	33.8%	25.7%
	50's	20.4%	22.8%
	60's	6.0%	15.8%
	70's	0.6%	7.5%
	80's	0.0%	1.3%
	n	2,605	156,622
categories of coaches	Coach1	66.2%	74.9%
	Coach2	10.9%	7.5%
	Coach3	17.3%	13.5%
	Coach4	5.5%	4.1%
	n	2,559	156,622

- heard inappropriate behavior of 'XXX' around you during coaching activity within the past five years. "Verbal abuse", "corporal punishment / hazing", "sexual harassment", and "hindering freedom of career-path choice" are inserted into 'XXX'.
- 3) Coaches registered with the Japan Sport Association are coaches trained and certified by the Japan Sport Association. The Japan Sport Association trains coaches in four categories (coach 4, coach 3, coach 2, and coach 1 in descending order of competition level).
 - 4) A 5-level Likert scale (5 being very confident to 1 being not confident at all) was used as an item to the question, "How confident are you in the measures to prevent 'XXX' when you are coaching?". "Verbal abuse", "corporal punishment / hazing", "sexual harassment", and "hindering freedom of career-path choice" are inserted into 'XXX'.
 - 5) The results showed that the activities of JSPO official coaches are outside the school sports club rather than the school sports club. In addition to the report on harassment peculiar to the school sports club (or typical harassment of the school sports club), this report may help understand the tendency of harassment in general sports coaching in Japan.
 - 6) Regarding "whether coaches have seen and heard inappropriate behavior or not" within the past five years, if a coach has seen and heard one or more of "verbal abuse", "corporal punishment and hazing", "sexual harassment", and "obstruction of career choice" he/she was placed in a group which has seen or heard inappropriate behavior group, and if he/she has not seen or heard any inappropriate behavior, he/she was placed in not seen or heard inappropriate behavior group for the analysis.
 - 7) Decision tree analysis is one of the data mining methods and is a method of expressing the items and judgment criteria necessary for decision making in the form of a tree. Since the analysis results are arranged hierarchically from the factors that are strongly related to the dependent variable, it is easy to understand the interrelationship between each item (Shinmura, 2002). It is a method based on blending statistics and artificial intelligence, allowing us to easily understand the important points useful in decision making by automatically generating the threshold visually. (Toyoda, 2006).
 - 8) Considering the size of the sample, the maximum depth of the tree is four. The minimum case of the parent node is 100, and the minimum case of the child node is 50. IBM SPSS Ver. 27 for Windows was used for the analysis.