Effects of Received Social Support on Athletes' psychological well-being

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Although the importance of social support has been broadly recognised within the sports field, its mechanism has not yet been fully examined in terms of identifying effective dimensions, providers and timings. The current study's aim was to investigate the received support experienced by university student athletes respectively from coaches and teammates over the course of a week, and examine its relationship with self-confidence and feelings of adaptation. Two hundred thirty-one university student athletes completed questionnaires including the Japanese version of the Athlete Received Support Questionnaire (the ARSQ-J). The results indicated that received support might influence recipients' self-confidence both positively and negatively, depending on its dimensions and providers. Esteem support both from coaches and teammates were effective for self-confidence. Tangible support had a positive impact if provided from teammates, but a negative impact if provided by coaches. With regard to the feelings of adaptation, it was indicated that tangible support both from coaches and teammates were negatively correlated with the outcome. In conclusion, its dimension and provider of support can determine the effectiveness of social support. Further clarification of received support in a sport context by examining its dimensions, providers and contexts will contribute to the identification of effective support, which may be useful in supporting athletes.

Keywords: Received social support, psychological well-being

1. Introduction

Social support has broadly been acknowledged to contribute to an athlete's physical and psychological health (Richman et al., 1989), and reported as a salient resource for maintaining a healthy life as an athlete (Holt and Hoar, 2006; Rees, 2007; Rees and Freeman, 2012). In social support research, there are two functional aspects of social support: perceived support and received support, which should be separately examined (Holt and Hoar, 2006). Perceived support refers to an individual's belief that assistance would be available if required, while received support refers to supportive behaviour, which an individual has received during a specific time frame (Gottlieb and Bergen, 2010). In sport psychology, researchers have been more focused on perceived support as a salient factor for athletes (e.g. Tsuchiya, 2012). Perceived support has been identified to correlate with athletes' self-confidence (Rees and Freeman, 2007), and lower levels of bur-

nout (Freeman et al., 2011). Based on such findings, social support-based intervention has been mainly attempted to improve the recipients' perception of support (e.g. recognising their available social support using the Social Support Network-Map; Tsuchiya, 2012).

On the other hand, received support has not been fully examined, even though the benefits of the receipt of supportive behaviour have been reported in relation to sport-performance related factors such as performance improvement (Freeman et al., 2009), self-confidence in sport (Freeman et al., 2014), and dealing with stressors during a competition (Weston et al., 2009). Not only with such sport performance-related outcomes, it has been discussed in relation to athletes' the maintenance of psychological well-being including mental health (Hagiwara and Isogai, 2014). As such, the importance of receipt of support has been recognised both for athletes' sport performance and psychological well-being.

In sport, social support was identified to contain four dimensions by an interview research concerning social support conducted on athletes by Rees and Hardy (2000). The four dimensions were *emotional support* (enhancing feelings of being cared for or loved), *esteem support* (referring to competence or self-esteem), *informational support* (providing the individual with advice or guidance), and *tangible support* (providing concrete instrumental assistance). Based on these categorised dimensions of social support in sport, Freeman et al. (2014) developed the Athlete Received Support Questionnaire (the ARSQ), which is a questionnaire to measure four dimensions of support in a sport context. Using the ARSQ, it was demonstrated that emotional and esteem support positively affecting athlete's self-confidence prior to a competition (Freeman et al., 2014). As such, some dimensions of support were positively correlated, while others were not correlated with outcomes. In addition, informational support was not correlated with self-confidence (Katagami and Tsuchiya, 2015), which is consistent with the literature suggesting that not all types of social support are beneficial to the recipient (Reinhardt et al., 2006). Thus, we need to specify which dimension of social support is effective in sport contexts.

In addition, the effectiveness of support can be determined not only by support dimensions but also by several factors including support provider, timing of support provision and the recipients' demand of support (Holt and Hoar, 2006). In terms of support provider, it is well known that coaches play a significant role in athletic life (Coatsworth and Cornroy, 2006; Jowett and Cookerill, 2003). In addition, teammates can be salient support providers for athletes (Hassell et al., 2010). It is known that athletes prefer certain support providers depending on the person's specialities (Dakof and Taylor, 1990), therefore, it seems to be important to specify an optimal provider for each dimension of support. For instance, coaches who expertise with the sport can be preferred as a provider of sport-specific support including advice (i.e. informational support) compared to those who less expertise in the sport such as teammates or peers. Examination of impacts of received support with specifying an optimal support provider would help to understand an effective support both for athletes' sport performance and psychological well-being aspects. The

aims of the current study were therefore to: 1) identify the effective support types and providers on athletes' self-confidence, and 2) athletes' feelings of adaptation.

2. Method

2.1. Participants

Two hundred and thirty-one university student athletes (male = 150, female = 79, missing value = 2) from two Japanese universities volunteered to participate in this study. The average age of the participants was $19.98 \pm .49$ years. The athletes had played either individual sports ($n = 53$; e.g. swimming, track and field, gymnastics, Judo, etc.), or team sports ($n = 155$; e.g. football, basketball, lacrosse, baseball, etc.). Missing values were 23. The participants had completed for a mean of 8.45 ± 4.36 years in the sport.

2.2. Procedures

After an approval was gained from the first author's university ethics committee, voluntary research participants were recruited from two Japanese universities. The participants were provided with a letter containing a brief explanation of the study, and they were announced that they were free to withdraw at any given time without prejudice. Then, they were asked to complete the informed consent form. No participant chose to withdraw.

2.3. Measures

2.3.1. The ARSQ-J

The Japanese version of the Athlete Received Support Questionnaire (ARSQ-J: Katagami and Tsuchiya, 2015) was used to measure athletes' received support. The participants were asked to rate on a 5-point Likert (0: none, 1: once or twice, 2: three or four times, 3: five or six times and 4: more than seven times) using 22 items concerning emotional (5 items: e.g., "cheer you up"), esteem (5 items: e.g., "reinforce the positives"), informational (6 items: e.g., "give you advice about what to do"), and tangible (6 items: e.g., "help your training") support. For each item, the participants rated the frequency of support they received respectively

from coaches and teammates over the previous week.

The reliability and validity of the ARSQ-J was confirmed in a pilot study*¹ for the current research. The data of the current study also indicated acceptable level of internal consistency of the scale ($\alpha = .89-.94$). The validity was confirmed by the results indicating correlations with “Positive relationship with others” ($r = .40, p < .05$), which is a sub-scale of psychological well-being scale (Nishida, 2000). It is common to ask frequencies of received support with answer from choices in social support research focusing actual support measurement in sport psychology (e.g. Freeman et al., 2014) and in general psychology (Gottlieb and Bergen, 2010; Shiotani, 2014). Choosing from choices seems to be more appropriate in terms of encouraging participants to complete all the questions rather than filling in the number by themselves. Normality test was conducted throughout the study (emotional support $M = 2.16-2.82 \pm 1.23-1.46$, esteem support $M = 2.32-2.64 \pm 1.28-1.42$, informational support $M = 2.26-2.92 \pm 1.25-1.36$, tangible support $M = 2.06-2.50 \pm 1.31-1.57$) by Katagami and Tsuchiya (2015).

2.3.2. Self-confidence

The Revised Competitive State Anxiety Inventory-2 (the CSAI-2R: Cox et al., 2003) was used to measure a self-confidence in a sports context. There is no Japanese version of the CSAI-2R; however, there is a Japanese version of the CSAI-2 (Hashimoto et al., 1984). The CSAI-2R was sophisticated version of the CSAI-2. Cox et al. (2003) revised the CSAI-2 to achieve better internal consistency by eliminating few items and they made no change in the wording of the remaining items. We used Hashimoto et al. 's Japanese translated version of the CSAI-2, but we deleted the items that were removed in the CSAI-2R (Cox et al., 2003). Five final items were remained (e.g. “I’m confident about performing well”), and the participants rated these items on a 5-point Likert scale, from 1(not at all) to 5(extremely). The coefficient alpha reliability was .88 in the current study.

2.3.3. Feelings of adaptation

Feelings of adaptation was measured using a self-esteem scale (Yamamoto et al., 1982). Self-esteem is considered as an indicator of an individual’s feel-

ings of adaptation to the current situation (Okada, 2011). The scale contained 10 items and the participants rated these on a 5-point Likert scale, from 1(not at all) to 5(extremely).

2.3.4. Demographic data

Demographic information including age, gender, sport, sport experiencing year, and competitive level in team were gathered. Competitive level in the team was chosen from regular member, bench member, out of bench and others (e.g. currently being injured).

2.4. Analyses

ANOVA was conducted on the frequencies of received support from coaches and teammates with gender. Received support from coaches and teammates were simultaneously examined in the path analyses. We adopted Partial Least Square (PLS) regression algorithm and bootstrapping with 100 samples to estimate the probability values for significance. Formative approach was employed for the ARSQ-J in this study. All the examinations were conducted using SPSS statistics version 21.0. and Warp PLS (Kock, 2015). We examined the four dimensions of received support from coaches and teammates on self-confidence and feeling of adaptation, controlling for gender.

3. Results

3.1. Gender differences in the frequencies of received support

Gender differences in the frequencies of social support from coaches and teammates were examined (Table 1).

It was indicated that male athletes received significantly more esteem support from coaches compared to female athletes ($F(1, 222) = 4.47, p < .04, \eta^2 = .02$). Moreover, male athletes received emotional support compared to female athletes more frequently, although this difference was only marginally significant ($F(1, 222) = 2.97, p < .09, \eta^2 = .01$).

3.2. Different effects of received support on self-confidence by providers

Overall, our results indicated that some dimen-

Table 1 Descriptive statistics of the received support from coaches and teammates.

		Total samples		Males		Females		<i>F</i>	<i>p</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
coaches'	emotional support	3.37	4.66	3.77	4.85	2.63	4.22	2.97	.09 [†]
	esteem support	3.71	5.03	4.24	5.29	2.75	4.37	4.47	.04 [*]
	informational support	6.20	6.63	6.56	6.67	5.52	6.59	1.25	.27
	tangible support	4.58	5.89	4.97	6.27	3.82	5.06	1.95	.16
teammates'	emotional support	7.57	5.52	7.38	5.39	7.92	5.80	0.47	.49
	esteem support	6.95	5.40	7.14	5.56	6.60	5.14	0.51	.48
	informational support	8.59	6.59	8.56	6.42	8.55	6.95	0.00	.99
	tangible support	6.99	5.89	7.17	6.05	6.62	5.63	0.44	.51
	coaches ARSQ	17.54	20.99	19.04	21.84	14.80	19.28	2.01	.16
	teammates ARSQ	30.31	21.73	30.55	22.03	29.70	21.37	0.07	.79
	self-confidence	14.64	4.94	15.00	4.87	13.99	5.05	2.10	.15
	feeling of adaptation	31.43	6.06	32.05	5.88	30.33	6.29	4.01	.05 [*]

* $p < .05$, [†] $p < .10$, $n = 219$

sions of received support have an effect on athletes' self-confidence, but in different ways, depending on dimensions and support providers (**Table 2**). The model was statistically significant, ($p < .05$), with a multiple correlation squared of .06. First, the receipt of esteem support both from coaches ($\beta = .10$, $p < .05$) and teammates ($\beta = .19$, $p < .01$) positively predicted self-confidence, which suggests the importance of esteem support in sports contexts. The relationship of teammates' esteem support

with self-confidence was an inverted U curve; the relationship was strongest at moderate levels of esteem support and weaker at more extreme and less extreme levels of esteem support. Esteem support was the only dimension, showing a positive impact of support both from coaches and teammates on self-confidence.

In addition, tangible support was demonstrated to positively predict self-confidence when it was provided from teammates; however, this was not

Table 2 Effects of social support from coaches and teammates on self-confidence and feeling of adaptation.

Outcome	Independent variables		<i>R</i> ²	β	<i>SE</i>	<i>p</i>	<i>f</i> ²	<i>Path</i>
self-confidence			.06					
	gender			-.12	.07	.03 [*]	.01	Warped
	coaches'	emotional support		.03	.07	.31	.01	Warped
		esteem support		.10	.07	.05 [*]	.02	Warped
		informational support		.02	.07	.39	.00	Warped
		tangible support		-.17	.06	.01 ^{**}	.03	Warped
	teammates'	emotional support		.06	.07	.18	.01	Warped
		esteem support		.19	.06	.01 ^{**}	.03	Warped
		informational support		.05	.07	.25	.00	Warped
		tangible support		.11	.07	.04 [*]	.02	Warped
feeling of adaptation			.08					
	gender			-.11	.07	.04 [*]	.01	Warped
	coaches'	emotional support		.08	.07	.12	.01	Warped
		esteem support		-.02	.07	.37	.00	Warped
		informational support		.12	.06	.03 [*]	.00	Linear
		tangible support		-.16	.06	.01 ^{**}	.02	Warped
	teammates'	emotional support		.03	.07	.34	.00	Warped
		esteem support		.15	.06	.01 ^{**}	.02	Warped
		informational support		-.21	.06	< 0.001 ^{***}	.02	Warped
		tangible support		-.15	.06	.01 ^{**}	.01	Warped

*** $p < .001$, ** $p < .01$, * $p < .05$, $n = 231$

β = Standardized Partial Regression Coefficients, *SE* = Standard Error, *p* = probability of β

the case when it came from coaches. More specifically, tangible support from coaches were negatively predicted self-confidence levels ($\beta = -.17$, $p < .01$), while tangible support from teammates was positively associated with self-confidence ($\beta = .11$, $p < .05$). That is, the effectiveness of tangible support on self-confidence may depend on who is providing it. The relationship between coaches' tangible support and self-confidence reflected a S curve; the relationship was strongest at moderate levels of tangible support and weaker at more extreme levels of tangible support. There were no significant relationships between emotional and informational support from either coaches or teammates and self-confidence.

3.3. Different effects of received support on feelings of adaptation by providers

The model was statistically significant, ($p < .05$), with a multiple correlation squared of .08. It was indicated that esteem support from teammates was positively correlated with feelings of adaptation ($\beta = .15$, $p < .01$). In addition, for coaches' support, informational support was positively correlated ($\beta = .12$, $p < .03$). On the other hand, some support dimensions were negatively correlated with the outcome. Teammates' informational support was negatively correlated with feelings of adaptation ($\beta = -.21$, $p < .001$). Tangible support both from coaches and teammates were negatively correlated with the outcome ($\beta = -.16$, $p < .01$, $\beta = -.15$, $p < .01$). Emotional support was not identified to correlate with the outcome in the study.

4. Discussion

The current study aimed to investigate athletes received support from coaches and teammates using the ARSQ-J, which enables the measurement of received support in a sport setting with differentiating dimensions of support. First, we examined this to see whether there were differences in received support by gender. Moreover, the relationship between received support and athletes' self-confidence and feelings of adaptation was examined to verify whether there is a difference in the effectiveness of received support, depending on support providers, whether coaches or teammates.

4.1. Gender differences in the frequencies of received support

Gender is a one of key factors to consider in social support research (Holt and Hoar, 2006). In fact, researchers reported females tend to receive more emotional support from others (Rook and Jones, 2002). In the current study, however, there was no significant difference in the receipt of emotional support between gender. In addition, the results indicated that male athletes received more esteem support from coaches compared to female athletes. Although there was a gender difference solely in the frequencies of esteem support from coaches, but no gender differences in other dimensions of support from coaches or teammates.

4.2. Influence of received support on self-confidence

Although the literature has indicated that social support as one of the sources of self-confidence by interviewing with several world-class athletes (Hays et al., 2007), the relationship between social support and athletes' self-confidence using a large sample with differentiating support providers had not yet been examined. In the current study, therefore, the impact of each dimension of support from coaches and teammates on self-confidence were examined. It was indicated that the effectiveness of some dimensions of social support varies with its support providers. Specifically, it was suggested that esteem and tangible support may be the dimensions which are related to self-confidence.

Regarding esteem support, both coaches and teammates should be noted as an effective support provider in terms of predicting self-confidence. The importance of esteem support has been recognised within the context of youth athletes (Coatsworth and Conroy, 2006). The current results demonstrated the esteem support play a significant role not only for youth athletes, but also for adolescent athletes. As Freeman et al. (2014) suggested that esteem support contribute to one's sense of control or mastery, leading to the high levels of athletes' self-confidence, the examination of support with such variables would be needed to clarify the mechanisms of esteem support in further research.

Although it was reported that athletes rarely receive tangible support from teammates (Hassell et

al., 2010), the results in the current study indicated that athletes frequently received tangible support from teammates, and such practical assistance had a positive influence on athletes' self-confidence. On the other hand, the current results showed that received tangible support from coaches negatively predicted self-confidence, suggesting that coaches' practical assistance may damage athletes' self-confidence. As the literature suggest that support may possibly damage the recipient's self-esteem (Bolger et al., 2000), athletes might doubt their own ability or competency if they receive more practical assistance than they expect by their coaches. The result indicated that teammates can be a better support provider of tangible support than coaches in terms of athletes' self-confidence.

There are two possible reasons why tangible support from teammates was identified to be more effective compared to support from coaches. First, it has been known that peer group can be more significant others specifically at the stage of adolescent and beyond (see Coleman and Roker, 1998). Moreover, athletes tend to spend a majority of time with their teammates in sport settings; therefore, their practical assistance play a significant role in athletes' implement of training sessions, which leads to athletes' self-confidence in sport. Second, athletes can receive support without or less feelings of burden when it is provided from teammates because athletes normally can be not only a recipient but also a provider of support within their mutual supportive relationship. In contrast, it is common for athletes to receive support from their coaches, but not to provide support to coaches. Such different relationships might be a factor to generate the differences in the effectiveness of support. Some researchers have identified the importance of a balance in support receipt and provision (Hagiwara and Isogai, 2014), indicating that support reciprocity may be one of the keys to examining social support effectiveness.

We focused on the different effects of support by providers in the current study. The importance of social support for self-confidence has been identified both among high level athletes (Hays et al., 2007) and competitive athletes (Freeman et al., 2014). Consistent with these findings, it was indicated that the importance of social support on athletes' self-confidence. Furthermore, the current findings confirmed that not all types, but esteem support both

from coaches and teammates generally play a significant role in athletes' self-confidence. One important notice is that the value of coefficient of determination in the current study was relatively low ($R^2 = .06$ and $.08$). This implies that social support might not be a strong predictor of athletes' self-confidence; therefore, examination of more inclusive model with other relating factors (e.g. mastery experience) would be desirable to examine athletes' self-confidence.

4.3. Influence of received support on feelings of adaptation

Social support has been considered to be correlated with psychological well-being in a positive manner such as the lower levels of burnout (Freeman et al., 2011). However, some researchers have warned that not all types of support are equally effective (Reinhardt, et al., 2006); therefore, the specification of an effective dimension of support should be considered to be salient in the recent social support research. The results of the current study indicated that tangible support both from coaches and teammates were negatively correlated with feelings of adaptation, whereas the previous study indicated that the usefulness of tangible support specifically in a stressful situation such as a pre-competition week (Freeman et al., 2014). This implies that the context in which support was received might also determine the effectiveness of received support as it is noted that support play a significant role specifically when an athlete is facing stressful events in order to prevent to result in athletes' negative consequences (Holt and Hoar, 2006). The current results indicated that practical assistance in a normal time period would have a detrimental effect on athletes' feelings of adaptation.

As a positive effect of support, coaches' informational support and teammates' esteem support were positively correlated with the feelings of adaptation. First, the importance of sport-specific advice was generally indicated, and coaches are broadly deemed as an effective provider of technical advice or reinforcement in the acquisition of skill in sport (Smoll et al., 1993). The results of the current study suggest that advice from coaches play a significant role not only as a guide for performance improvement, but also as a basis of athletes' recognition of being accepted in the team. In contrast, informa-

tional support from teammates was negatively correlated with feelings of adaptation, suggesting that advice or guidance from peers might not be useful for athletes' psychological well-being. Being told what to do from peers might lead athletes doubt their current style in the sport. Further research would be needed to confirm the usefulness of informational support for athletes.

Also, teammates' esteem support was indicated to predict athletes' feelings of adaptation, implying that positive reinforcements from someone who shares similar situations would be effective for athletes' psychological well-being. Even though coach has been broadly recognised as salient for one's athletic life (Jowett and Cookerill, 2002), the results of the current study suggested that teammates would also be significant support providers, specifically in terms of athletes' feelings of adaptation. Support exchange with someone who is under a similar position or circumstance is called 'peer support' (Sharp and Cowie, 1998). Peer support is reported as a salient among adolescent swimmers, and specifically, esteem support from teammates as a source to re-energise and motivate themselves (Hassell et al., 2010). Moreover, support from peers becomes more significant during adolescent stage (Coleman and Roker, 1998). Given that teammates plays more significant role for athletes in terms of psychological well-being, further social support intervention programs should be focused more on social support exchange among teammates.

5. Conclusion

The current study aimed to investigate the received support from coaches and teammates, and examine its influence on athletes' self-confidence and feelings of adaptation. In conclusion, the effectiveness of received support may depend on its dimensions and providers. Holt and Hoar (2006) suggest that sport psychologists should inform coaches and parents the importance of providing social support. The findings of the current study provided detailed information of effective types of support with a specification of its support provider.

Some limitations should be noted in the current study. First, the data collection was conducted in a week without specifying athletes' stressful time frame such as pre-competition period. Commonly, social support has been discussed in the stressful

context (see Tsuchiya, 2012). The results of the current study indicated the relationship between received support and psychological health related variables within the time frame of an ordinary week in season. Further examination should be done with specification of context, in which received support can be more critical for athletes. Second, we tried to clarify the relationship of social support and variables solely by measuring frequency of received support. Further research should examine athletes' subjective usefulness of received support in order to confirm an optimal social support for athletes. Third, we adopted a quantitative research method with a cross-sectional design to compare the relationship between the outcomes and support. Though quantitative research method using a large number of sample (i.e. nomothetic approach) is useful to understand the trend in general, alternative research method would be desired for a deep understanding of the relationship between social support and outcome variables. For instance, researchers would employ qualitative research method such as an interview containing questions such as 'how do you find the support useful?', focusing on the differences in support providers. Finally, an examination of an effective support with a specification of athletes' characteristics (e.g. sporting levels and types of sport) would be useful for a better understanding of social support.

In applied sports contexts, researchers brainstormed social support for athletes, and concluded to encourage coaches and parents to provide athletes with emotional support (Richman et al., 1989). Moreover, the existing literature suggests informational support should be provided by coaches, whereas emotional and tangible support from family members are encouraged (Holt and Hoar, 2006). Given that esteem support was positively correlated with self-confidence regardless of support providers in this study, esteem support should also be encouraged within a team to enhance athlete' self-confidence. The findings in the current study have added the detailed information regarding an effective support and its providers into the literature.

Note

*1: The reliability and validity of the ARSQ-J was further confirmed through the pilot study. The results indicated the acceptable fit to the data ($\chi^2(78) = 75.83$ ($p < .01$), CFI = .944,

RMSEA = .076). Internal reliability was acceptable in the ARSQ-J ($\alpha = .88-.92$). For the validity examination, variables measuring positive relationship others and perception to others were used. Both total scores of the ARSQ-J and all the dimensions were positively correlated with "positive schema" to others ($r = .23-.32$, $p = .05$). Furthermore, the positive relationship between total scores of the ARSQ-J and "positive relationship with others" were marginally significant ($r = .21$, $p = .06$).

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Main Works:

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Membership in Learned Societies:

- Japan Society of Physical Education, Health and Sport Sciences
 - International Society of Sport Psychology
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