Original Article

The relationships among non-verbal communication, emotional response, satisfaction, and participation adherence behavior in sports participants

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Abstract:

The purpose of this study was to test the relationship between the types of non-verbal communication by sports coaches and their participants' emotional responses, satisfaction, and participation adherence behavior intention by setting up structural equation modeling (SEM). The study included 253 participants who were receiving lessons from sports coaches in South Korea and had the following results: First, sports coaches' paralanguage and physical appearance had a positive impact on participants' positive emotional responses. Second, sports coaches' kinesics and paralanguage had a positive relationship with satisfaction level. Third, there was no statistically significant relationship between participants' positive responses and their satisfaction. Lastly, positive emotional responses and satisfaction drove the participation adherence behavior intention. In this study, particular types of the coaches' non-verbal communication were found to be an important antecedent variable in predicting the participants' positive emotional responses, satisfaction, and participation adherence behavior intention. These results may be invaluable in helping sports coaches recognize the efficiency of non-verbal communication beyond that of verbal communication.

Key Words: emotional responses, non-verbal communication, participation adherence behavior, satisfaction

Introduction

Sports activities require participants to play by the rules and thus offer the benefit of providing opportunities for social interaction on top of entertainment and participation (Kolt et al., 1999; White & Duda, 1994). According to the Physical Activity Council (2016), 55.9% of Americans who engaged in sports, fitness, or physical activity in 2015 did so in activities that burned calories at high volumes while a mere 27.6% of them were engaged in inactive activities. They reported that Americans who participated in such activities more than 150 times a year accounted for a whopping third of the entire population. These findings illustrate that a large population is involved in sports activities. However, Wilson and Brookfield (2009) argued that a significant portion of the participants quit in the middle or switched to other activities. In light of this, Kang (2000) mentioned that among many circumstantial reasons that interfere with sports activities including cost, time constraints, or peer relationship, dysfunctional or awkward relationship between the coach and the trainee should pose the biggest problem. Indeed, the roles of a coach in the field of sports expand beyond simply providing techniques and well-planned programs for better performance to having excellent communication with the participants. In this case, strong communication skills are deemed essential (Culver & Trudel, 2000; Spink, 1991).

Scholars who are interested in human behavior have made efforts to find communication skills that enable good interaction with others (Mohr & Nevin, 1990). The term "communication" refers to a course of exchanging ideas and opinions between two or more people (Losee, 1999). Generally, communication has two types: verbal and non-verbal. Verbal communication is a way of conveying one's emotion or meaning via words while non-verbal communication means exchanging information via gestures, facial expressions, or voice rather than words (Knapp & Hall, 2002). Simply put, non-verbal communication is considered an important means of delivering information to others without words (Burgoon, Birk, & Pfau, 1990; Zoric, Smid, & Pandzic, 2007). Birdwhistel (1970) found that words account for just a third of communication, and the remaining two thirds consist of non-verbal channels. All of the findings above point to the importance of non-verbal communication. Types of non-verbal communication include kinesics, paralanguage, physical appearance, and proxemics (Knapp & Hall, 2012; Sundaram & Webster, 2000). *Kinesics* is body movements that appear in communication such as gestures, postures, facial expressions, or eye contact (Bowden, 2011). *Paralanguage* is relevant to the vocal features of language, such as tone, pace of speech, or pitch (Sikorski, 2012); even laughter or no fluencies (e.g., um, ah) are part of paralanguage (Jacobi, 2009). *Physical appearance* refers to the outward look of a person and includes physical attractiveness, clothing, or hairstyle (Zoric et al., 2007). *Proxemics* refers to the amount of space and proximity that people feel it necessary to set between themselves and others to have a conversation (Harrigan, 2009).

In sports, as elsewhere, both verbal and non-verbal components of communication are frequently used (Neill, 1993). Still, studies are lacking in analyzing the efficiency of communication types for sports coaches (Choi & Nam, 2012). Non-verbal communication supports active interaction between the sender and the receiver of a message (Sundaram & Webster, 2000). In the same sense, Chu and Lee (2013) argued that, if properly used in the service industry, non-verbal communication creates a chain effect of improving the image of the service provider and increasing the customers' satisfaction level. In other words, not only verbal but also non-verbal communication skills of a service provider are critical means of driving positive emotional responses and satisfaction from customers (Gabbott & Hogg, 2001). Many studies have found that the emotional responses following the purchase of goods or receipt of service influence not only satisfaction level (Eggert & Ulaga, 2002; Zeelenberg & Peters, 2004) but also future behavioral intentions (Oliver, 1993). Satisfaction, in particular, is claimed to be an important antecedent variable in predicting future behavior (Cronin, Brady, & Hult, 2000; Garbarino & Johnson, 1999). Based on these findings, a hypothesis can arise on the relationship between the type of a coach's communication, emotional responses, satisfaction levels, and participation adherence behavior intention. Consequently, the present study aimed to break down non-verbal communications of sports coaches into four types and verify their relationship with the participants' emotional responses, satisfaction levels, and adherence behavior intention to stay in the program by setting up structural equation modeling. The research hypotheses were as follows:

- H1: A coach's non-verbal communication will affect the participants' positive emotional responses.
- H2: A coach's non-verbal communication will affect the participants' satisfaction.
- H3: A positive emotional responses will affect satisfaction.
- H4: A positive emotional responses will affect participation adherence behavior intention.
- H5: Satisfaction will affect participation adherence behavior intention.

Materials and Methods

Participants

This study involved surveys with sports participants who were taking lessons from a coach in South Korea. A total of 300 questionnaires were distributed in the first half of 2016, and those who did not completely respond were excluded from the research. Two hundred and fifty-three questionnaires whose answers proved to be valid by convenience sampling method were finally chosen for the research data. The respondents comprised 149 males (58.9%) and 104 females (41.1%). In addition, the biggest age group was those in their 40s with 78 respondents (30.8%) followed by those in their 50s with 56 respondents (22.1%), those in their 20s with 48 respondents (19.0%), those in their 60s or older with 42 respondents (16.6%), and those in their 30s with 29 respondents (11.5%). Types of sports activities included tennis, badminton, golf, swimming, yoga, and others. The demographic details of the respondents are shown in Table 1.

Table 1. The demographic details of the respondents

Variables	Categories	Frequency (<i>n</i> = 253)	Percent (%)
Gender	Males	149	58.9
	Females	104	41.1
Ages	20s	48	19.0
	30s	29	11.5
	40s	78	30.8
	50s	56	22.1
	60s or older	42	16.6
Types of sports activities	Tennis	40	15.8
	Badminton	24	9.5
	Golf	53	20.9
	Swimming	48	19.0
	Yoga	66	26.1
	Others	22	8.7

Measures

The questionnaire used in this study covered four components: non-verbal communication, positive emotional responses, satisfaction, and participation adherence intention. All questions were answered on a Likert scale of 5 points (from 1 = "strongly disagree" to 5 = "strongly agree"). The instrument used by Burgoon et al. (1990) and Sundaram and Webster (2000) was modified for use in measuring the types of a coach's non-verbal communication. A total of 12 questions were used with sub-scales—kinesics, paralanguage, physical appearance, and proxemics—allotted three questions each. Based on the measurement instruments used in their studies (e.g., Holbrook & Batra, 1987; Waston, Clark, & Tellegen, 1989), Zhang's (2015) scale was used with 5 questions as a single factor. Additionally, the instrument originally generated by previous studies (Mano, & Oliver, 1993; Oliver, 1993) and used by Park (2013) was adapted to measure participants' satisfaction. This instrument was allotted with four items as a single factor. Lastly, for participation adherence behavior intention,

the scale developed by Ajzen and Driver (1992) and used by many researchers in Korea including Lee (2010) was used. This instrument was allotted with three questions as a single factor.

Statistical Analysis

Statistical package for social science (SPSS 18.0) and analysis of moment structures (AMOS 18.0) packages were used to analyze the collected data in the present study. In confirmatory factor analysis (CFA), the uni-dimensionality of measurement variables for each construct was tested, and goodness of fit index (GFI), comparative fit index (CFI), normed fit index (NFI), root mean square residual (RMR) and root mean square error of approximation (RMSEA) were used in fit measures. In order to meet the standards for fit measures, questions with low explanation power as shown by the values of squared multiple correlations (SMC) were removed. To verify convergent validity, the test used construct reliability (CR) and average variance extracted (AVE). According to Fornell and Larcker (1981), when the values of CR and AVE are higher than .70 and .05 respectively, there is no problem. Discriminant validity is proved when the square value of the correlation coefficient of the variables is lower than AVE. Additionally, the value of Cronbach's alpha (α) was used to test the internal consistency of the questions. Finally, structural modeling was used to test the research hypothesis.

Results

Confirmatory Factor Analysis

In CFA, the critical ratio of each measurement variable surpassed the absolute value of 1.96 and had statistical significance ($p < .001$). The results were $\chi^2 = 227.077$, $p = .186$, $\chi^2/df = 1.086$, GFI = .930, CFI = .994, NFI = .927, RMR = .050, and RMSEA = .019. GFI, CFI, and NFI passed the reference value of .90, and RMR and RMSEA were lower than .05, proving the model fit. In the convergent validity test, CR showed .70 or higher for all with AVE exceeding .50. It means that questions measured identical constructs have a strong correlation. The discriminant validity test employed a methodology proposed by Fornell and Larcker (1981), and the square value of correlation coefficient between all variables did not surpass the AVE values. It means relatively low correlations between questions measured different constructs. Reliability analysis showed the Cronbach's alpha (α) value standing between .796 and .901. The results of CFA and correlation analysis were shown in Table 2 and Table 3.

Table 2. The results of CFA and reliability analysis

	Factor loadings	Standard error	Critical ratios	CR	AVE	α
Kinesics 1	.867	.081	10.743***			
Kinesics 2	1.115	.091	12.279***	.829	.620	.822
Kinesics 3	1	-				
Paralanguage 1	1.056	.093	11.393***			
Paralanguage 2	.897	.083	10.778***	.786	.551	.816
Paralanguage 3	1	-				
Physical appearance 1	1.489	.166	8.969***			
Physical appearance 2	1.253	.134	9.385***	.821	.613	.796
Physical appearance 3	1	-				
Proxemics 1	1.055	.097	10.876***			
Proxemics 2	1.228	.111	11.011***	.829	.618	.828
Proxemics 3	1	-				
Positive emotional response 1	.990	.078	12.709***			
Positive emotional response 2	1.069	.078	13.689***			
Positive emotional response 3	.973	.073	13.255***	.904	.654	.901
Positive emotional response 4	1.046	.077	13.631***			
Positive emotional response 5	1	-				
Satisfaction 2	.889	.066	13.561***			
Satisfaction 3	.878	.063	13.947***	.790	.557	.835
Satisfaction 4	1	-				
Participation adherence 1	1.287	.087	14.594***			
Participation adherence 2	1.263	.087	14.746***	.837	.633	.894
Participation adherence 3	1	-				

*** $P < .001$

Table 3. The correlation analysis among variables

	1	2	3	4	5	6	7
Kinesics	1						
Paralanguage	.336	1					
Physical appearance	-.035	.043	1				
Proxemics	.071	.039	.032	1			
Positive emotional response	.180**	.224**	.276**	.060	1		
Satisfaction	.364**	.408**	.128*	.012	.257**	1	
Participation adherence	.221**	.193**	.094	.012	.346**	.301**	1

* $p < .05$, ** $p < .01$

Structural Equation Modeling

The structural model of this research proved to have good fit across the board. The results were $\chi^2 = 230.650$, $p = .194$, $\chi^2/df = 1.083$, $GFI = .929$, $CFI = .994$, $NFI = .926$, $RMR = .051$, and $RMSEA = .018$. In testing hypothesis 1, a coach's paralinguistic (C.R. = 2.406, $p < .05$) and physical appearance (C.R. = 4.388, $p < .001$) drew positive emotional responses from participants. In testing hypothesis 2, a coach's kinesics (C.R. = 3.952, $p < .001$) and paralinguistic (C.R. = 4.182, $p < .001$) showed a positive relationship with satisfaction. Other sub-level factors in hypotheses 1 and 2 were not tested at a level of statistical significance. In hypothesis 3, positive emotional responses by the participants showed a positive impact on their satisfaction levels, but the level of the impact was not statistically significant. In the tests for hypotheses 4 and 5, participants' positive emotional responses (C.R. = 4.443, $p < .001$) and satisfaction (C.R. = 3.368, $p < .001$) increased their participation adherence intention. A summary of the test results is presented in Table 4.

Table 4. Summary of structural equation modeling

Hypothesis	Path	Estimate	S.E.	C.R.	p
H1-1	Kinesics → Positive emotional response	.139	.077	1.814	.070
H1-2	Paralinguistic → Positive emotional response	.168	.070	2.406	*
H1-3	Physical appearance → Positive emotional response	.275	.063	4.388	***
H1-4	Proxemics → Positive emotional response	.019	.073	.266	.791
H2-1	Kinesics → Satisfaction	.419	.106	3.952	***
H2-2	Paralinguistic → Satisfaction	.408	.098	4.182	***
H2-3	Physical appearance → Satisfaction	.097	.084	1.152	.249
H2-4	Proxemics → Satisfaction	-.055	.098	-.548	.584
H3	Positive emotional response → Satisfaction	.186	.099	1.888	.059
H4	Positive emotional response → Participation adherence	.390	.088	4.443	***
H5	Satisfaction → Participation adherence	.200	.060	3.368	***

* $p < .05$, ** $p < .01$, *** $p < .001$

Discussion

The present study tested the relationship between different types of a sports coach's non-verbal communication—kinesics, paralinguistic, physical appearance, and proxemics—and participants' positive emotional responses, satisfaction, and participation adherence behavior intention based on structural modeling. A coach's paralinguistic and physical appearance had a significant impact on positive emotional responses from the participants; other sublevel factors did not prove to be significant. Non-verbal communication is a more convenient way of exchanging emotions or behavior intentions than words and is used as a means to deliver the sender's message more easily and quickly (Kim & Lee, 2015). Among the types of non-verbal communication, paralinguistic relates to the vocal features of language and includes the tone and pace of speech and pitch (Sikorski, 2012); even laughter and no fluencies (e.g., um, ah) are part of paralinguistic (Jacobi, 2009). Earlier studies have found that paralinguistic presents the speaker's feelings or confidence and inevitably affects the audience in building trust (Signman, 1978; Sundaram & Webster, 2000). Physical appearance is also known as "appearance message," indicating that how a person appears to the others will influence the level of efficiency of their communication (Richmond & McCroskey, 2004). Such a phenomenon is witnessed in politics, and there are findings that a politician's likeable appearance affects the voters' decision. In the same regard, a coach's proper use of paralinguistic and his or her likeable image should have positively influenced the participants.

A coach's kinesics and paralinguistic in sports activities also had a positive impact on the level of satisfaction felt by the participants. In a previous study, Chu and Lee (2013) showed that non-verbal communication improves the sender's image and drives the audience's satisfaction if properly used by the sender. The service industry, in particular, values service providers' communication skills very highly in drawing positive customer responses and satisfaction (Gabbott & Hogg, 2011). The results of this study can be supported by these precedent studies. Kinesics is body movements that appear over the course of communication and include gestures, postures, facial expressions, and eye contact (Bowden, 2011). Using gestures, for example, helps persuade the audience by making them feel comfortable and believe that the speaker has a professional knowledge of the topic (Leigh & Summers, 2002). Many studies have found that gestures imply the speaker's feelings or emotions (Coulson, 2004; Stock, Righart, & Gelder, 2007). As mentioned earlier, a coach's paralinguistic proved to draw positive emotional responses from the participants and drive their satisfaction levels in this study. In sports, as elsewhere, both verbal and non-verbal components are frequently used for communication (Neill & Caswell, 1993). Non-verbal communication especially facilitates interaction between the message sender and the receiver (Sundaram, 2000). Sports coaches should reflect on these findings and employ non-verbal communication in addition to verbal communication to draw better emotional responses and satisfaction from their participants.

This study did not find statistical significance in the relationship between the participants' positive emotional responses and their satisfaction levels. As a matter of fact, positive emotional responses and satisfaction level of sports participants were found to drive their participation adherence behavior intention. In

this regard, precedent studies suggested that customers' emotional responses (Oliver, 1993; Yu & Dean, 2001) and satisfaction (Cronin et al., 2000; Garbarino & Johnson, 1999) would be deemed critical antecedent variables in predicting future behavior. Emotional response refers to the psychological inner state of the human mind shown as a result of external stimuli (Yu & Dean, 2001). Satisfaction comes from comparing a customer's expectations of goods or services with what is received in return for paying the price (Chon, 1990). In a nutshell, positive emotions such as joy or pleasure felt by the participants while communicating with the coach must have reinforced their behavior intention to continue the sports. Cho (2011) argued that a customer feels satisfied with a good or a service when his or her needs and expectations have been met, and this state of mind builds trust and leads to repeat purchase. Applying this finding, it can be translated that the participants' satisfaction with the coach met the needs of the participants and reinforced their participation adherence behavior intention.

Conclusions

This study proved that certain types of a coach's non-verbal communication in sports activities are important antecedent variables in predicting the participants' positive emotional responses, satisfaction, and participation adherence behavior intention. These results will be invaluable in helping sports coaches recognize the efficiency of non-verbal communication beyond that of verbal communication. Earlier studies argued that a speaker would enjoy the maximum effect when mixing verbal and non-verbal communications according to the situation (Gabbott & Hogg, 2001; Lee, 2016). Therefore, the sender of a message should remember to use both types properly for better communication. However, non-verbal behaviors can be displayed in different forms based on cultural factors and learned conventions (Matsumoto, 2006). With this in mind, follow-up studies should focus on how nonverbal communications differ between countries or cultures and how they affect future behavior of sports participants.

References

- Ajzen, I., & Driver, B. L. (1992). Application of theory of planned behavior to leisure choice. *Journal of Leisure Research*, 24, 207-224.
- Birdwhistell, R. L. (1970). *Kinesics and context: Essays on body motion communication*. University of Pennsylvania Press Philadelphia.
- Bowden, M. (2011). *Winning body language: Control the conversation, command attention, and convey the right message without saying a word*. New York, NY: McGraw-Hill.
- Burgoon, J. K., Birk, T., & Pfau, M. (1990). Nonverbal behaviors, persuasion, and credibility. *Human Communication Research*, 17(3), 140-169.
- Cho, S. H., & Lee, J. W. (2011). The effects of coffee house image on perceived value, customer satisfaction, trust and revisit intention. *Journal of Foodservice Management*, 14(4), 297-320.
- Choi, Y. L., & Nam, S. B. (2012). The effect of golf teaching professional's non-verbal communication on trust and participation satisfaction. *Korean Journal of Sports Science*, 21(4), 553-564.
- Chu, Y. K., & Lee, J. H. (2013). The effect of nonverbal communication participation by restaurants on brand image and brand trust -focused on the family restaurants. *Tourism Research*, 38(4), 257-275.
- Coulson, M. (2004). Attributing emotion to static body postures: Recognition accuracy, confusions, and viewpoint dependence. *Journal of Nonverbal Behavior*, 28(2), 117-139.
- Cronin, J. J., Brady, B. K., & Hult, G. T. (2000). Assessing the effects of quality, value, customer satisfaction on customer behavioral intentions in service environments. *Journal of Retailing*, 76(2), 193-218.
- Culver, D. M., & Trudel, P. (2000). Coach-athlete communication within an elite alpine ski team. *Journal of Excellence*, 3, 28-54.
- Eggert, A., & Ulaga, W. (2002). Customer perceived value: A substitute for satisfaction in business markets? *The Journal of Business and Industrial Marketing*, 17(2/3), 107-118.
- Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Gabbott, M., & Hogg, G. (2001). The role of non-verbal communication in service encounters: A conceptual framework. *Journal of Marketing Management*, 17(1-2), 5-26.
- Garbarino, E., & Johnson, M. S. (1999). The different roles of satisfaction, trust, and commitment in customer relationships. *Journal of Marketing*, 62(2), 60-70.
- Harrigan, J. (2009). *New handbook of methods in nonverbal behavior research*. New York: Oxford University Press.
- Holbrook, M. B., & Batra, R. (1987). Assessing the role of emotions as mediators of consumer responses to advertising. *Journal of Consumer Research*, 14(3), 404-420.
- Jacobi, I. (2009). *How to say it with your voice*. Upper Saddle River, NJ: Prentice Hall.
- Kang, S. W. (2000). A study on the dropout of the commercial sport program participants. *Korean Journal of Physical Education*, 39(4), 81-91.
- Kim, S. K., & Lee, H. S. (2015). Effect of nonverbal communication of golf instructors on the evaluation of instructors and intension to continuance of participation. *Journal of Sport and Leisure Studies*, 59(1), 401-410.

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- Knapp, M. L., & Hall, J. A. (2002). *Nonverbal communication in human interaction*. Crawfordsville, IN: Thomson Learning.
- Kolt, G., Kirby, R., Bar-Eli, M., Blumenstein, B., Chadha, N. K., Liu, J., & Kerr, G. (1999). A cross cultural investigation of reasons for participation in gymnastics. *International Journal of Sport Psychology*, 30, 381-398.
- Lee, E. J. (2010). The map type of golf leader affects in fun and continuous participation will of the map object person. Master's thesis, Chungnam Nation University, Korea.
- Lee, S. Y. (2016). The effect of non-verbal communication elementary school teachers on teaching dance classes commitment and satisfaction. Master's thesis. Kongju National University, Kongju, Korea.
- Leigh, T. W., & Summers, J. O. (2002). An initial evaluation of industrial buyers impressions of sales persons nonverbal cues. *The Journal of Personal Selling and Sales Management*, 22(1), 41-53.
- Losee, R. L. (1999). Communication defined as complementary informative processes. *Journal of Information, Communication and Library Science*, 5(3), 1-15.
- Mano, H. & Oliver, R. L. (1993). Assessing the dimensionality and structure of the consumption experience: Evaluation, feeling, and satisfaction. *Journal of Consumer Research*, 20, 451-466.
- Matsumoto, D. (2006). Culture and nonverbal behavior. In V. L. Manusov & M. L. Patterson (Eds.), *The SAGE handbook of nonverbal communication* (pp. 219-236). Thousand Oaks, CA: Sage Publications.
- Mohr, J., & Nevin, J. R. (1990). Communication strategies in marketing channels: A theoretical perspective. *Journal of Marketing*, 54(4), 36-51.
- Neill, S. R., & Caswell, C. (1993). *Body language for competent teachers*. London: Routledge.
- Oliver, R. L. (1993). Cognitive affective and attribute bases of the satisfaction response. *Journal of Consumer Research*, 20(3), 419-430.
- Park, D. K. (2003). A study on the hotel customers in relationship with perceived service quality, perceived value, satisfaction, loyalty, and intention reusing. Master's thesis, Dong-A University, Busan, Korea.
- Physical Activity Council (2016). The relationship between the flow experience and participation adherence behavior intention according to the participation motivation of cycling experience program participants. <http://www.physicalactivitycouncil.com/pdfs/current.pdf>
- Richmond, V. P., & McCroskey, J. C. (2004). *Nonverbal behavior in interpersonal relations*. Boston, MA: Allyn and Bacon/Pearson Education.
- Riggio, R. E., & Feldman, R. S. (2005). *Applications of nonverbal communication*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Siegmán, A. W. (1987). The telltale voice: Nonverbal messages of verbal communication. In A. W. Siegmán & S. Feldstein (Eds.), *Nonverbal behavior and communication* (2nd ed.) (pp. 351-434). Hillsdale, NJ: Lawrence Erlbaum.
- Sikorski, W. (2012). Paralinguistic communication in the therapeutic relationship. *Archives of Psychiatry and Psychotherapy*, 1, 49-54.
- Spink, K. (1991). The psychology of coaching. *New Studies in Athletics*, 6(4), 37-41.
- Stock, J. V. D., Righart, R., & Gelder, B. D. (2007). Body expressions influence recognition of emotions in the face and voice. *Emotion*, 7(3), 487-494.
- Sundram, D., & Webster, C. (2000). The role of nonverbal in service communication encounters. *The Journal of Service Marketing*, 14(5), 378-389.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063-1070.
- White, S. A., & Duda, J. L. (1994). The relationship of gender, level of sport involvement, and participation motivation to task and ego orientation. *International Journal of Sport Psychology*, 25, 4-18.
- Wilson, K., & Brookfield, D. (2009). Effect of goal setting on motivation and adherence in a six-week participation program. *International Journal of Sport and Participation Physiology*, 6, 89-100.
- Yu, Y. T., & Dean, A. (2001). The contribution of emotional satisfaction to consumer loyalty. *International Journal of Service Industry Management*, 12(3), 234-250.
- Zeelenberg, M., & Pieters, R. (2004). Beyond valence in customer dissatisfaction: A review and new findings on behavioral responses to regret and disappointment in failed services. *Journal of Business Research*, 57, 445-455.
- Zhang, M. (2015). The influence of guest house service quality on overseas tourists' positive emotional responses and satisfaction. Master's thesis, Keimyung University, Daegu, Korea.
- Zoric, G., Smid, K., & Pandzic, I. S. (2007). Facial gestures: Taxonomy and applications of non-verbal, non-emotional facial displays for embodied conversation agents. In T. Nishida (Ed.), *Conversational informatics: An Engineering approach*. West Susse
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