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Development and Validation of the Multidimensional Sportspersonship Orientations Scale

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Much research has been conducted on sportspersonship[1] and moral behavior (see Shields & Bredemeier, 1995, for a review). Such research has been largely influenced by two broad theoretical approaches: the social-learning and the structural-developmental perspectives (see Weiss & Bredemeier, 1986, for a review). The social-learning position (e.g., Bandura, 1986) puts a marked emphasis on models and reinforcement as determinants of appropriate and inappropriate behaviors. The structural-developmental approach (e.g., Kohlberg, 1969) posits that moral reasoning is the major determinant of behavior and that such reasoning goes through several levels of development. This latter perspective has made an important contribution to our knowledge on moral behavior in sport. For instance, it has been shown that athletes display lower levels of moral reasoning in sport than in nonsport settings and that moral reasoning represents an important determinant of aggressive tendencies (for reviews, see Bredemeier & Shields, 1993; Shields & Bredemeier, 1995).

More recently, Vallerand and colleagues (Vallerand, 1991, 1995; Vallerand, Deshaies, & Cuerrier, in press; Vallerand, Deshaies, Cuerrier, Brière, & Pelletier, 1996; Vallerand & Losier, 1994) have proposed a social-psychological approach to sportspersonship that posits a number of propositions. First, contrary to the social learning and structural-developmental approaches, which respectively put the emphasis on reinforcement/punishment and individual differences, the social-psychological approach posits that both elements should be taken into consideration in predicting sportspersonship behavior (for discussions on the role of personal and social influences in sportspersonship, respectively, see Vallerand et al., in press; Vallerand & Losier, 1994). Second, a broad range of social factors, and not simply reinforcement and/or punishment, are expected to play an important role in sportspersonship behavior. Thus, cultural, structural (types of sports, competitive

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level, etc.), interpersonal, and situational variables (variables in the immediate situation, such as pressure from the coach and teammates, the score, etc.) are expected to influence sportspersonship behavior (for more elaborate discussions on social factors and sportspersonship, see Vallerand, 1991, 1995). Third, social agents (e.g., coaches, parents, and teammates) are expected to influence athletes' labeling of the content of sportspersonship actions (e.g., Backman, 1985). It is thus proposed that through their interactions with their peers, parents, coaches, and other sport participants, children come to learn what sportspersonship is and what it is not. An important implication of this proposition is that athletes should be in a prime position to identify the nature of the concept of sportspersonship.

In line with this last assumption, Vallerand et al. (1996) recently asked athletes from various sports to assess the extent to which various sport situations and behaviors pertained to the realm of sportspersonship. The results from a factor analysis of these ratings revealed that sportspersonship behaviors can be reliably placed under five dimensions. In the first dimension, athletes display a full commitment toward sport participation by showing up and working hard during all practices and games, and by acknowledging one's mistakes and trying to improve. The second dimension deals with the respect for social conventions to be found in sports: shaking hands after the game, recognizing the good performance of the opponent, and being a good loser. In the third dimension, the emphasis is on respect and concern for the rules and officials, even when the official appears incompetent. The fourth dimension, namely true respect and concern for the opponent, is evidenced through lending one's equipment to the opponent, agreeing to play even if the opponent is late (rather than winning by default), and refusing to take advantage of an injured opponent. Finally, in the fifth dimension, the approach toward sportspersonship is negative. Here the athlete takes a win-at-all-costs approach toward playing, shows a temper after having made a mistake, and competes for individual prizes and trophies. In sum, sportspersonship can be defined as concern and respect for the rules and officials, social conventions, the opponent, as well as one's full commitment to one's sport and the relative absence of a negative approach toward sport participation.

The findings from the Vallerand et al. (1996) study are important because, among other things, they provide a definition of sportspersonship that can be captured in a scale assessing individual differences (or orientations) in the propensity to act in a sportspersonlike fashion. The field of sportspersonship is presently without a sound scale assessing individual differences in sportspersonship orientations. Most scales that have been developed are unidimensional and have not been developed in line with a given theory and sound psychometric procedures (e.g., Haskins, 1960; Johnson, 1969; McAfee, 1955). Others represent applications of scales used in other areas of moral reasoning (e.g., Bredemeier, 1985) whose content for sports has not been fully validated. The development of a sportspersonship scale would be extremely useful in research assessing, for instance, the effects of sport participation and interventions on the development of sportspersonship orientations, as well as testing theoretical hypotheses derived from the social-psychological approach (Vallerand, 1991, 1995; Vallerand & Losier, 1994). There thus seems to be a need to develop an instrument based on the sportspersonship definition of Vallerand et al. (1996).

In light of the above, the purpose of the present set of studies was to develop and validate the Multidimensional Sportspersonship Orientations Scale (MSOS).

The MSOS is based on the sportspersonship definition (Vallerand et al., 1996) and serves to measure athletes' orientations on the five sportspersonship dimensions. The psychometric properties of the MSOS were ascertained in two studies.

Study 1

There were three goals to Study 1. A first goal was to develop the MSOS. A second purpose was to confirm the factorial structure of the MSOS through confirmatory factor analysis, as well as to assess the internal consistency of the MSOS subscales. Finally, a last purpose consisted in assessing the construct validity of the MSOS through correlations among the five subscales, as well as between the MSOS subscales and behavioral intentions assessed within the confines of hypothetical scenarios specific to each sportspersonship dimension.

Development of the MSOS

Several steps were involved in developing the MSOS. First, based on the definition of sportspersonship (Vallerand et al., 1996), a list of items were prepared. We decided to focus on the behavioral aspects of sportspersonship in order to make salient the behavioral orientation of the individual and not merely the attitudinal (affective) component. This should allow the scale to eventually better predict sportspersonship behavior. Twenty items were prepared for each of the five dimensions. Second, this first version of the MSOS was then presented to two sport psychology researchers who were not involved in the development of the scale. These two researchers were asked to read a definition of each of the five sportspersonship dimensions and to use these definitions in order to correctly place the items in their respective subscales. This allowed us to assess the content validity of the preliminary version of the MSOS. Through this phase, we identified 13 items for each of the five dimensions. Third, 15 amateur athletes, varying in age from 12 to 16 years, completed this refined (65-item) version of the MSOS. Items the athletes found unclear were reformulated in line with the athletes' suggestions. This led to a preliminary 65-item version of the MSOS. Finally, 132 athletes from various sports completed this version of the scale. The results from a factor analysis, where the best five items of each subscale were retained, led to a 25-item version of the MSOS.

Method

The 25-item version of the MSOS was administered to 362 amateur athletes (211 boys and 151 girls) with a mean age of 14.40 years. The athletes were selected from six sports: badminton, basketball, hockey, swimming, track and field, and volleyball. Athletes completed the MSOS following a practice. In addition, athletes completed five hypothetical scenarios depicting situations pertaining to the five sportspersonship dimensions underlying the MSOS subscales. These scenarios were prepared in line with similar instruments (e.g., the Anger Response Inventories; Tangney et al., 1996). Thus, we met together and identified situations related to each of the sportspersonship orientations. Then, scenarios reflecting these situations were created. Finally, together with two sport psychologists unrelated to the present program of research, we identified the most representative scenario for

each dimension. These scenarios were presented in a general fashion so that they could be completed by athletes of any sports. They dealt with obeying the coach in practice, shaking hands with the opponent after a heartbreaking loss, criticizing the referee or official after he or she made a mistake that has cost the athlete the game, refusing to win by default and insisting that the opponent be allowed to play, and doing something that, although not illegal, will impair the opponent's performance (distracting an opponent). For each scenario, athletes were asked to complete two questions dealing with their intention to behave in line with the sportspersonship orientation at hand or against such an orientation. Questions were scored on a 5-point scale: *no* (1), *maybe no* (2), *I don't know* (3), *maybe yes* (4), and *yes* (5).

Results and Discussion

The Confirmatory Factor Analysis (CFA). Data on the MSOS was subjected to a CFA with the EQS statistical package (Bentler, 1995). The EQS statistical procedure provides a statistical assessment of the adequacy of a factor solution submitted to explain the observed covariance matrix. The fitting function estimated by the procedure provides a chi-square statistic that is a function of the difference between the model examined (e.g., the proposed five-factor model) and a saturated model (with a perfect fit), consisting of all possible sources of variance and covariance among the variables. It should be noted that, contrary to most analyses, a nonsignificant chi-square generally indicates an acceptable fit. However, the chi-square value can be influenced by several factors, including sample size, and thus, other adjustment indices become necessary in order to assess the adequacy of the proposed model. EQS provides the Bentler-Bonett nonnormed fit index (BBNNFI) and the comparative fit index (CFI). These indices can vary from 0 to 1, with the highest value indicating the best fit. Values of .90 and higher are generally perceived as providing support for the proposed model (see Byrne, 1994).

Before assessing the fit of the model, we examined the univariate and multivariate normality of the variables. Results revealed the presence of univariate normality as indicated by the values of skewness (values ranged from –1.32 to +1.69) and kurtosis (values ranged from –1.48 to +2.02). The multivariate normality was supported by the Mardia's normalized estimate (11.56). Results from the CFA revealed that the five-factor model provided an acceptable fit for the data, $\chi^2(265, N = 362) = 532.53, p < .001$, CFI = .90, BBNNFI = .89. The factor loadings appear in Table 1. In general, loadings were high to moderate. Although some loadings were small (i.e., Items 21 and 22), all were significant (t statistics > 3.17, $p < .05$), and no cross-loadings had to be postulated to obtain a satisfactory fit. As can be seen from the table, the five factors reflect the hypothesized MSOS structure. Overall, this five-factor model confirms the factorial structure of the MSOS and provides further support for the multidimensional definition of sportspersonship (Vallerand et al., 1996) which underlies the MSOS.

Internal Consistency of the MSOS Subscales. In addition, we computed the internal consistency scores (Cronbach's alpha) for each of the five factors. These appear at the bottom of Table 1. As can be seen these values ranged from .71 (the Commitment subscale) to .86 (the Social Conventions subscale), except for the Negative Approach subscale, which had an alpha value of .54. Thus, the first four subscales showed adequate reliability, whereas that of the Negative Approach subscale should be investigated further.

Table 1 Item Means, Standard Deviations, and Loadings from the Confirmatory Factor Analysis

Variable	*M*	*SD*	Commitment	Social conventions	Rules and officials	Opponent	Negative approach
1. Important to be at all practices	4.32	.77	.55				
2. Give maximum effort	3.98	.78	.57				
3. Think how to improve	4.39	.68	.57				
4. Do not give up after mistakes	4.15	.89	.61				
5. More effort even if certain of losing	4.21	.88	.59				
6. Congratulate opp. after a loss	4.00	1.04		.86			
7. Shake hands with opp.'s coach	2.95	1.53		.52			
8. Congratulate opp. for good play	3.90	1.13		.87			
9. Congratulate opp. after a win	3.84	1.01		.66			
10. Win or lose, shake hands with opp.	4.04	1.21		.81			
11. Obey the official	4.18	.90			.72		
12. Respect other officials' decisions	3.69	1.14			.68		
13. Respect official even if not good	3.10	1.20			.60		
14. Truly abide by all rules of sport	4.52	.70			.75		
15. Respect the rules	4.31	.81			.72		
16. Ask that disq. opp. continue	2.26	1.25				.67	
17. Help opp. after a fall	3.07	1.34				.64	
18. Rectify unjust situation for opp.	2.47	1.22				.71	
19. Lend equipment to opp.	2.60	1.34				.64	
20. Not take advantage of injured opp.	3.15	1.41				.57	
21. Won't admit own mistakes	1.69	1.08					.35
22. Compete for rewards (ex. trophies)	2.73	1.28					.26
23. Make excuses for poor play	2.03	1.06					.58
24. Criticize coach's instructions	1.75	.92					.55
25. Gets mad if makes a mistake	2.61	1.19					.48
Alpha			.71	.86	.83	.78	.54

Correlations Among the Five MSOS Subscales. The level of association among the five subscales was computed through correlations among the latent constructs derived from the confirmatory factor analysis. These values are presented in Table 2. As expected, results revealed the presence of positive and moderate correlation values among the subscales, except for those involving the negative approach subscale with the Commitment (–.31) and the Rules and Officials (–.33) subscales, which were negative. These findings are in line with our hypothesis and provide additional support for the construct validity of the MSOS.

Correlations With Behavioral Intentions. Pearson correlations were computed between the MSOS subscales and the behavioral intentions. Correlations appear in Table 3. Results revealed, as hypothesized, that within each of the hypothetical scenarios, the MSOS subscale relevant to the scenario was more strongly related to behavioral intentions than the other subscales. For instance, in the social conventions scenario, the Social Conventions subscale displayed a stronger correlation (r = .48) with behavioral intentions than did the other subscales. It should be noted, however, that the Rules and Officials subscale yielded correlations slightly higher in the first two scenarios (rs = .24 and .22) than in the rules and officials

Table 2 Correlations Among the Latent Constructs

Subscales	2	3	4	5
1. Commitment	.37	.44	.27	–.31
2. Social conventions		.48	.45	.00*
3. Rules and officials			.40	–.33
4. Opponent				.03*
5. Negative approach				

Note. Correlations were significant ($p < .05$), except for those with an asterix.

Table 3 Correlations Between the MSOS Subscales and Behavioral Intentions in Contexts Related to the Specific Sportspersonship Orientation

	Behavioral intentions in different contexts				
Subscales	1	2	3	4	5
1. Commitment	**.29**	.12	.01	.12	–.01
2. Social conventions	.18	**.48**	–.04	.00	–.12
3. Rules and officials	.24	.22	**.20**	.14	–.35
4. Opponent	.03	.09	.09	**.25**	–.23
5. Negative approach	–.19	–.16	–.10	–.12	**.16**

Note. Correlations of .10 and above were significant at $p < .05$.

scenario (r = .20). In addition, the correlation involving the Negative Approach subscale and its relevant scenario was only .16. Notwithstanding these latter two results, the above findings indicate that, in general, the sportspersonship orientations are significantly related to the intention to behave in contexts pertinent to the orientation but less so in other contexts. This provides further support for the validity of the MSOS.

Study 2

The purpose of Study 2 was to assess the temporal stability of the MSOS. Because the MSOS represents a contextual measure (specific to sport) and not a global measure (or a trait) as such (see Vallerand, in press), it was expected that the MSOS subscales would show a moderately high pattern of stability over time. Thus, test-retest correlations in the .60s were expected.

Method

In order to test the temporal stability of the MSOS, 53 athletes from the same types of sports surveyed in the other studies (age M = 14.82 years) completed the MSOS twice within a 5-week period. The questionnaire was completed in the locker room after a practice in conditions similar to those involved in Study 1.

Results and Discussion

Results revealed that correlations varied from .56 to .76, with a mean test-retest correlation of .67. The highest correlation was obtained with the Opponent and the Commitment subscales (both .76) while the lowest correlation was obtained with the Social Conventions subscale (.56). The other correlations were .68 (the Rules and Officials subscale) and .59 (the Negative Approach subscale). Though these correlations are not extremely high, it should be underscored that the MSOS is not a trait measure but a contextual measure specific to the sport domain. Such measures are expected to reflect a moderately high level of stability, while still being somewhat responsive to the influence of contextual social factors (see Vallerand, in press). Overall, the pattern of results with the test-retest correlations provide support for the reliability of the MSOS.

General Discussion

The results of the present studies revealed that the MSOS possesses adequate levels of reliability and validity. With respect to the reliability of the MSOS, it was shown that, in general, it has adequate levels of internal consistency, as well as an acceptable level of temporal stability over five weeks. The findings from the present studies are also encouraging with respect to the factorial and construct validity of the MSOS. First, results from the confirmatory factor analysis confirmed the five-factor structure underlying the MSOS. Second, as predicted correlations among the subscales were positive and moderate in magnitude except for those involving the Negative Approach subscale, which were either negative or near zero. Finally, correlations involving the MSOS subscales with behavioral intentions revealed

that each subscale generally correlated the most with the appropriate scenario, thereby supporting the discriminant validity of the MSOS.

While the present findings are encouraging, some caveats are in order. First, the MSOS was validated with a restricted segment of athletes (i.e., young French-Canadian athletes from a limited number of sports). Second, the Negative Approach subscale yielded a low alpha value (.54). This low internal consistency value could be due to several factors, including the lack of reliability of the subscale. Third, the Rules and Officials subscale was not found to correlate more strongly with its related hypothetical scenario. With these limitations in mind, it should be made clear that the present findings represent only the starting point of validation research on the scale. A more complete evaluation of the psychometric properties of the MSOS will only be possible through additional research. Such research should focus on replicating the present findings with different populations. In addition, the internal consistency of the Negative Approach subscale, as well as the relation between the Rules and Officials subscale and behavioral intentions should be further assessed. Finally, the MSOS should also be compared to related scales such as the Scale of Children's Action Tendencies in Sports (Bredemeier, 1994) to further test the construct validity of the MSOS.

Additional research could be directed at theoretical and applied issues. From a conceptual perspective, in line with the social psychological position, sportspersonship orientations are hypothesized to influence behavior in at least two ways. First, sportspersonship orientations should mostly influence behaviors relevant to a given orientation. Sportspersonship-related behaviors not relevant to a given dimension should be affected minimally by this sportspersonship orientation. This hypothesis was supported in this study by the discriminant correlations involving the MSOS subscales and athletes' behavioral intentions. However, these findings need to be confirmed with actual behavioral measures. Second, the sportspersonship orientations should interact with the situation at hand in affecting sportspersonship behavior. Specifically, when the situation is not too demanding (one's team is clearly going to win), most athletes may be expected to display sportspersonship behavior irrespective of their sportspersonship orientations. However, when the situation is taxing (e.g., the score is tied and thus behaving in a sportspersonship fashion may entail losing the game), then sportspersonship behavior should be emitted mostly by athletes with high sportspersonship orientations (see Vallerand, 1991,1995; Vallerand et al., in press).

The MSOS could also be used in applied research. For instance, it could be employed to assess changes in sportspersonship orientations as a function of intervention programs. Studies in this area (e.g., Bredemeier, Weiss, Shields, & Shewchuk, 1986) have attempted to do so, but have only used unidimensional measures of sportspersonship orientations. In light of the findings reported in this article, it is possible that such studies have not picked up all of the effects produced by the intervention program. Using the MSOS would allow a more precise assessment of the changes involved in such programs. It would then be possible to determine what orientations are affected by such programs, as well as ascertain which changes are the most long lasting. Clearly, the use of the MSOS could prove valuable from an applied perspective.

In sum, the MSOS represents a new instrument that shows reliability and validity. Although additional research is needed to further the knowledge of its psychometric properties, the scale would appear to represent a useful tool for researchers interested in studying sportspersonship.

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Notes

[1] In line with APA guidelines on nonsexist language, the term *sportspersonship* is being used instead of *sportsmanship*. These two terms should be considered equivalent. Thus, although the term *sportsmanship* had been used in our earlier work (Vallerand, 1991, 1995; Vallerand et al., in press; Vallerand et al., 1996; Vallerand & Losier, 1994), from now on the term *sportspersonship* will be used.

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