PERCEIVED GROUP COHESION AND MULTIDIMENSIONAL PERFECTIONISM IN SPORT SITUATIONS AT CROATIAN TABLE TENNIS RECREATIONAL PLAYERS

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Abstract
The aim of the study is to find differences in culturally adjusted facets of multidimensional perfectionism in sport situations (internalized and externalized perfectionism) and perceived group cohesion (pure friendship and mixed social-task orientation), addressed on recreational table tennis players. Group Environment Questionnaire (GEQ) and Sport Multidimensional Perfectionism Scale (MSSP) are applied. The sample of 116 recreational table tennis players who play in Association of recreational table tennis players in Zagreb SOKAZ is examined. The results obtained show that married recreational table tennis players express higher internalized perfectionism, while mixed (social-task oriented) perceived cohesion is the highest at participants with the college degree. For other three independent variables (league category, playing experience and position on the ranking list), none statistically significant difference was found. The results are explained in terms of a nature of perfectionism and group cohesion at recreational athletes.

Key words: cultural adjustment, differences, table tennis

Introduction
This study deals with two adapted imported instruments for measuring multidimensional perfectionism in sport situations and perceived group cohesion in terms of their metric characteristics and the aspect of interpretability in Croatian sport context. Multidimensional perfectionism in sport is chosen as relevant personality characteristic for sport success, while perceived group cohesion is the indicator of group (team) functioning within the large project on development of psychological talent in Olympic champions in the USA (Gould, Dieffenbach & Moffett, 2001). Cohesion is considered as significant characteristic because of its large influence onto functioning of group (Rot, 1983). The correlation between team cohesion and results in sport competitions (at elite American university basketball and football teams) indicated a high level of significantly positive correlation between team cohesion and success (ranged from 0,55 to 0,67). Zakrajsek et al (2007) studied the relationship between cohesion among coaches and cohesion among team members and perceived group (team) efficacy, obtaining that cohesion oriented to the task is much more important for the team than social cohesion. The analysis of the relationship between the cohesion related to task and social cohesion and team success, at top basketball and football players, revealed that both group cohesion aspects for both sports are high positively correlated to team success (Carron, Bray & Eys, 2002). The potential disadvantages of too high cohesion in sports teams can be reflected on both aspects of group cohesion, on group and individual level (Hardy, Eys & Carron, 2005). This short research overview it can be concluded that in general group cohesion more often shows positive correlation with real and perceived success in sports, while the nature of this correlation is not so simple.

Table tennis as a team sport is cooperative (but co-active): it requires different level of cooperation than in some interactive sport (basketball, for example) (Murray, 2006). Wang, Huang & Chang (2011) showed that there was no significant difference in team support and team cohesion among college (amateur) table tennis players in terms of the frequency of training per week, seniority in the sports team, best team result and their current grades, but significant differences are found among different duration of training time in regards to both the team support and team cohesion of table tennis players. There was a correlation between team support and team cohesion among college table tennis players (Wang, Huang & Chang, 2011). The research conducted at elite and amateur table tennis players showed that there is not a significant relation between emotional intelligence and team cohesion in amateur players, while this relation exists in elite athletes (Taghizadeh & Shojaie, 2012). Two facets of culturally adjusted perceived group cohesion at Croatian table tennis and basketball players have better construct validity than original ones: the aspects of combined social-task cohesion and friendship are conceptualized in terms of orientation of perceived group cohesion (Sindik & Missoni, 2013). One aspect, combined social-task perceived cohesion is described in terms of mixed types of motivation to be a member of a sport team. Athletes have a mixed motivation, which is not clear task-oriented, nor socially oriented. Second aspect is the dimension of friendship, that represents very clear motivation for belonging to a team, based on pure friendship tendencies. In this research, basketball players showed higher average results in the friendship than table tennis players. Table tennis players showed higher mixed (combined social and task orientation) than basketball players.

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Younger players in both sports showed higher average results in the dimension of friendship than older players, while older players showed higher combined social and task orientation. Multidimensional perfectionism in sport (hereinafter MPS) is based on the presumption that perfectionism tendencies can function only in some areas of life, in this case in specific sports situations (Dunn, Gotwals & Causgrove Dunn, 2005). Anshel & Eom (2003) researched the construct validity of adapted Hewitt’s MPS on the sample of athletes, finding four aspects of MPS: personal standards, anxiety over mistakes, parents' criticism, and coach's criticism. Dunn, Causgrove Dunn & Syrotunik (2002) found four latent aspects of the MPS-Football (MPS adjusted for football), where two similar dimensions (personal standards and anxiety over mistakes) and two different: perceived pressure from parents and perceived pressure from coach. Confirming four factors of Sport-MPS (hereinafter SMPS: personal standards, anxiety over mistakes, perceived pressure from parents and perceived pressure from coach), researchers found a positive correlation between multi-dimensional perfectionism and ego- and task- goal orientation in sports (Dunn et al., 2006). In the research that used SMPS athletes according are classified according their chosen personality characteristics (Martinent & Ferrand, 2007). Five clusters of athletes were differed by their level of: stability of concentration, somatic anxiety and anxiety over mistakes, perceived pressure from parents and self-confidence. Two aspects of perfectionism were significantly correlated with competitive anxiety. It seems that specific types of perfectionism are linked with specific types of sport activities. Sindik & Missoni (2013) have adjusted SMPS to a sample of Croatian table tennis and basketball players, obtaining two factors: internalized perfectionism (which can be described as personal accepted responsibility for behaviors) and externalized perfectionism (it can be explained in terms of responsibility for own behavior that is felt towards someone else, e.g. coach or parents). In this research, basketball players have higher average result than table tennis players in the dimension of internalized perfectionism, but in externalized perfectionism there is no statistical significant difference, while younger players in both sports have higher average scores in internalized perfectionism (Sindik & Missoni, 2013).

Methods

Subjects

The randomized sample of participants consisted of recreational table tennis players (N= 116) who play in various SOKAZ (acronym for the Table Tennis Organization of Clubs and Actives in Zagreb, in Croatian) leagues, from first league to twenty second one. The average age of table tennis players was 37±7.25 years (range 17-72 years). Recreational table tennis players were examined using online survey, distributed by e-mail to random players, during the summer 2012. All participants in the sample were men: they were informed about general research purposes, but without direct informing of the specific aims of the study.

Variables

Group Environment Questionnaire (GEQ) Group Environment Questionnaire (hereinafter GEQ) (Carron, Widmeyer, Brawley, 1985) with 18 items was used to measure perceived group cohesion in the (basketball and table tennis) team: participants have to self-evaluate themselves. Four aspects of group cohesion are: attractiveness of group task for an individual (hereinafter AGTI, 4 items), social attractiveness of a group to an individual (hereinafter SAGI; contains 5 items), group integration over task (hereinafter GIT; contains 5 items), group social integration (hereinafter GSI; contains 4 items). The subjects rate their usual attitudes pertaining to various aspects of group functioning on Likert 9-point scale, in a range from strongly disagree (1) to strongly agree (9). The instrument showed an acceptable internal consistency, indicated by the values of Cronbach’s alpha-coefficients, ranged from 0.68 to 0.75 for different scales (Carron, Widmeyer, Brawley, 1985), from 0.61 to 0.76 (Carron et al, 2002). In earlier research at selected sample of basketball players (included in this research as a subset, too), it appears that all original dimensions of the translated and adapted instrument have a low but satisfactory reliability, with Cronbach’s alpha-coefficients as follows: AGTI (0,55), SAGI (0.66), GIT (0.68), and GSI (0.68). The overall reliability of the questionnaire was 0.86 (Sindik, 2009). Considering to a Croatian samples of athletes adjusted dimensions (Sindik & Missoni, 2013), first component (social-task perceived cohesion) showed very high reliability (0.84), while the second (friendship-based cohesion) showed low (0.54) but still satisfying reliability.

Sport Multidimensional Perfectionism Scale (MSSP) To measure perfectionism, Sport Multidimensional Perfectionism Scale (hereinafter MSSP) is used, constructed for athletes in team sports (Dunn, Causgrove Dunn & Syrotunik, 2002). MSSP has 30 items, with four scales: personal standards (7 items), anxiety over mistakes (8 items), perceived pressure from parents (9 items) and perceived pressure from coach (6 items). Participants rate their usual behavior on Likert 5-point scale, from strongly disagree (1) to strongly agree (5). Cronbach's alpha-coefficients for all scales in the questionnaire indicate high level of internal consistency reliability, ranging from 0.76 to 0.89, but factor structure of dimensions vary depending on the type of sport and specific samples of athletes (Dunn, Gotwals & Causgrove Dunn, 2005). Previous research analyzed only smaller sample of basketball players that are included in this research, and showed that all original dimensions of the translated and adapted instrument have a low but satisfactory reliability.
personal standards (Cronbach’s α =0.62), anxiety over mistakes (α =0.77), perceived pressure from parents (α =0.61), and perceived pressure from coach (α =0.68), while the reliability of the whole MSSP was α =0.87 (Sindik, 2009). Considering to a Croatian samples of athletes adjusted dimensions (Sindik & Missoni, 2013), both components showed quite high Cronbach’s α reliability: 0.90 for internalized perfectionism and 0.80 for externalized perfectionism, respectively). Independent variables in the research were: marital status, education level, league category, playing experience and position on the ranking list. Education level, league category, playing experience and position on the ranking list were categorized in range from three to five categories.

Statistical analyses
Statistical analysis of data was performed using the statistical program SPSS 11.5. For determining the differences between married and unmarried participants, t-tests for independent samples is used.

Results
Table 1 - Differences in facets of perceived group cohesion and multidimensional perfectionism – marital status

<table>
<thead>
<tr>
<th>Marital status / variables</th>
<th>t-test (df=107)</th>
<th>p</th>
<th>M±σ married (40)</th>
<th>M±σ unmarried (40)</th>
<th>M±σ married (69)</th>
<th>M±σ unmarried (69)</th>
</tr>
</thead>
<tbody>
<tr>
<td>mixed cohesion</td>
<td>-1.27</td>
<td>0.21</td>
<td>0.163</td>
<td>0.913</td>
<td>0.424</td>
<td>0.984</td>
</tr>
<tr>
<td>pure friendship</td>
<td>-0.81</td>
<td>0.42</td>
<td>-0.556</td>
<td>0.927</td>
<td>-0.416</td>
<td>0.838</td>
</tr>
<tr>
<td>internalized perfectionism</td>
<td>3.04</td>
<td>0.00</td>
<td>-0.255</td>
<td>0.876</td>
<td>-0.734</td>
<td>0.740</td>
</tr>
<tr>
<td>externalized perfectionism</td>
<td>0.99</td>
<td>0.32</td>
<td>0.027</td>
<td>1.047</td>
<td>-0.162</td>
<td>0.785</td>
</tr>
</tbody>
</table>

Legend: M= Mean; σ= Standard Deviation

Table 2 - Differences in facets of perceived group cohesion and multidimensional perfectionism – education level

<table>
<thead>
<tr>
<th>Education level / variables</th>
<th>KW-test (df=2)</th>
<th>p</th>
<th>M±σ et., high school (47)</th>
<th>M±σ college (17)</th>
<th>M±σ university (52)</th>
</tr>
</thead>
<tbody>
<tr>
<td>mixed cohesion</td>
<td>6.567</td>
<td>.04</td>
<td>0.386±0.896</td>
<td>0.767±0.687</td>
<td>0.127±0.038</td>
</tr>
<tr>
<td>pure friendship</td>
<td>1.098</td>
<td>.58</td>
<td>-0.586±0.873</td>
<td>-0.384±0.734</td>
<td>-0.429±0.896</td>
</tr>
<tr>
<td>internalized perfectionism</td>
<td>3.592</td>
<td>.17</td>
<td>-0.509±0.856</td>
<td>-0.414±0.630</td>
<td>-0.675±0.822</td>
</tr>
<tr>
<td>externalized perfectionism</td>
<td>1.481</td>
<td>.48</td>
<td>-0.201±0.899</td>
<td>-0.030±0.923</td>
<td>-0.066±0.832</td>
</tr>
</tbody>
</table>

Legend: M= Mean; σ= Standard Deviation; KW= Kruskal-Wallis test

Table 3 - Differences in facets of perceived group cohesion and multidimensional perfectionism – league category, playing experience and position on the ranking list

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>mixed cohesion</td>
<td>6.388</td>
<td>.17</td>
<td>-0.492±0.725</td>
<td>-0.459±0.846</td>
<td>-0.405±0.917</td>
<td>-0.430±0.936</td>
<td>-0.666±1.003</td>
</tr>
<tr>
<td>pure friendship</td>
<td>0.937</td>
<td>.92</td>
<td>0.586±0.793</td>
<td>0.352±1.131</td>
<td>0.426±0.832</td>
<td>0.071±1.041</td>
<td>0.073±0.920</td>
</tr>
<tr>
<td>internalized perfectionism</td>
<td>6.131</td>
<td>.19</td>
<td>-0.587±0.790</td>
<td>-0.746±0.666</td>
<td>-0.681±0.794</td>
<td>-0.244±0.887</td>
<td>-0.777±0.811</td>
</tr>
<tr>
<td>externalized perfectionism</td>
<td>0.961</td>
<td>.92</td>
<td>-0.037±0.903</td>
<td>-0.083±0.854</td>
<td>-0.238±0.783</td>
<td>-0.163±0.847</td>
<td>-0.118±0.878</td>
</tr>
</tbody>
</table>

Legend: M= Mean; σ= Standard Deviation; KW= Kruskal-Wallis test
The differences in perceived group cohesion and multidimensional perfectionism, were analyzed, according to the marital status of table tennis recreational players. As shown in Table 1, there is only one statistically significant difference among four dimensions of perceived group cohesion and in multidimensional perfectionism in sport situations. This statistically significant difference is found at internalized perfectionism, where higher average scores have married players. The differences in perceived group cohesion and multidimensional perfectionism, were analyzed, according to the education level of table tennis recreational players. As shown in Table 2, there is only one statistically significant difference: it is found at mixed (social-task perceived) cohesion, where the highest average scores have players that finished college, while the lowest average scores have participants with university degrees. In Table 3 were analyzed the differences in perceived group cohesion and multidimensional perfectionism, according to the league category, playing experience and position on the ranking list. For all three independent variables, none statistically significant difference was found.

**Discussion and Conclusion**

The analyses of the differences for all aspects of multidimensional perfectionism in sport situations and perceived group cohesion, showed that married recreational table tennis players express higher internalized perfectionism, while mixed (social-task) perceived cohesion is the highest at participants with the college degree. The fact that married players have higher internalized perfectionism can be explained in terms of increased responsibility - married people general. Responsibility for everyday life can be extended on the sport field, too. The situation was similar in the research conducted by Sindik & Missoni (2013), where top basketball players had higher level of internalized perfectionism, compared with recreational table tennis players. To be married, similar as to be an elite athlete, player has to deeply internalize all external incentives, in spite of age (Sindik & Missoni, 2013). The result that mixed (social-task) perceived cohesion is the highest at participants with the college degree (while the lowest is at participants with the university degree), can be carefully explained as a «compensation effect». In other words, achieving college degree can make an impression for an individual that he/she can do more in his/her carrier, sport, etc. In fact, such individual can remain «somewhere between» his/her unachieved aspirations and real achievement: recreational table tennis can be a compensation for unfulfilled aspirations even in sport environment. Without direct accepting responsibility to make success in the top sport (with clear task orientation), individual with college degree can manipulate with his/her mixed motivation: if he/she couldn't win, his/her aspirations can be presented in public as recreational (social) orientation; in case of winning, an individual can express competitive (task) orientation. This explanation, in spite that it can sound pretentious, is in line with former results, that top basketball players and young athletes have a more emphasized pure friendship orientation than recreational table tennis players (Sindik & Missoni, 2013). Top basketball players might better accept responsibility for the competition than recreational table tennis players. On the other hand, the nature of sport (even recreational one) is the competition: it’s not surprising that some mixed (social and task) motives co-exist, especially at recreational athletes. Furthermore, the differences in certain aspects of multidimensional perfectionism and perceived group cohesion according to league category, playing experience and position on the ranking list could be expected, for example in higher perfectionism and more clear cohesion orientation (friendship) in more elite leagues, at players with less playing experience and with higher position on the ranking list. But none of possible differences was not found, what can be a consequence of equitable distribution of players with certain types of cohesion and perfectionism through different leagues and their various level of sport skills and aspirations, in the same league. The advantages of this study are at least two. First, this specific factorization of SMPS and GEQ is adapted for the sample of Croatian athletes, and applied on rarely researched sample of recreational table tennis players. Secondly, the findings obtained can be a guide to recreational table tennis players, to modify their actual level of multidimensional perfectionism and perceived group cohesion in desirable way to achieve their competitive or recreational goals. The shortcoming of this study may be the result of the examining process, carried out in non-standardized conditions, fulfilling questionnaires individually, disseminated by e-mail. The other disadvantage is limited possibility of generalization of the results obtained. One of the directions for future research can be the adjustment of the content of some items in MSSP and GEQ specifically for the table tennis situations (Sindik, 2009). The research of the combined social-task cohesion in various types of recreational sports in Croatia at different age groups of recreational athletes can be an interesting guideline for the future research. The concepts of externalized and internalized perfectionism can be interesting topic for future research.
Sažetak
Cilj studije je pronaći razlike u kulturalno prilagođenim aspektima višedimenzionalnog perfekcionizma u sportskim situacijama (internalizirani i eksternalizirani perfekcionizam) i percipirane kohezije grupe (čisto prijateljstvo i mješovite usmjerenosti na društvene odnose-zadatak) kod rekreativnih stolnotenisača. Primijenjeni su Upitnik grupnog okruženja (GEQ) i Višedimenzionalna skala perfekcionizma u sportskim situacijama (MSSP). Ispitan je uzorak od 116 rekreativnih stolnotenisača koji igraju u Udruzi stolnotenisača Zagreba SOKAZ. Dobiveni rezultati pokazuju da oženjeni rekreativni stolnotenisači pokazuju veći internalizirani perfekcionizam, dok je mješovita percipirana kohezija (usmjerena na društvo i zadatak) najviša za sudionike sa završenom višom školom. Za preostale tri nezavisne varijable (kategorija lige, igračko iskustvo i pozicija na rang listi), niti jedna statistički značajna razlika nije pronađena. Rezultati su objašnjeni u smislu prirode perfekcionizma i grupne kohezije kod sportaša rekreativaca.

Ključne riječi: kulturalna prilagodba, razlike, stolni tenis

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References