

The Experience of Competition in Same- Versus Mixed-Sex Team Sports

Joseph A. Knutson and Francis T. McAndrew
Knox College

It is not yet clear how the enjoyment of playing a sport is related to the degree of involvement an athlete feels in a game. This issue was examined in two field studies and one laboratory experiment focusing on how men and women experience competition on mixed-sex and single-sex sports teams, with a greater emphasis on the experience of women in these situations. The results showed that while the mean enjoyment levels for women in mixed-sex and single-sex games were not different, individual women usually display a preference for either mixed-sex or single-sex teams. The results also revealed that women felt more involved on single-sex teams and that both men and women passed to men more often in mixed-sex games. Future studies should look at possible differences between men and women in the sources of the rewards derived from competition.

Sports are one of the few domains in Western society that are still segregated by sex. As workplaces, universities, and even the armed services have become sexually integrated, barriers against mixed-sex sports remain firmly in place. Competitive team sports in particular are still a male domain, as women account for only 20% of team sport competitors in the United States (Deaner, et al., 2012). The sex difference in playing team sports has been documented cross-culturally (Apostolou, 2015; Deaner & Smith, 2013), and it is interesting for several reasons. For example, women clearly enjoy physical activity, as evidenced by the fact that American women report exercising at slightly higher levels than do American men (Deaner, et al., 2012). Furthermore, although there are only minor physical differences between young boys and girls (Thomas & French, 1985), a sex difference in the affinity for team sports appears very early in life; even in the primary grades, boys feel more competent at sports and value them more than do girls (Eccles & Harold, 1991).

There may be many reasons why women's sport participation rates are lower than men's, and these reasons may have little to do with a lack of interest. Men have more sports available to them, and traditional gender roles regarding child care and other domestic duties create obstacles for women that may simply make it more difficult to get large groups of women together at the same time for team competitions. It may also be that women simply find the experience of competing on teams to be less rewarding. The problem is that we simply do

not know, due to a lack of literature on women's subjective experiences with sports. The few studies that have pursued the question of motivational sex differences regarding sports participation have found that men cite competition and achievement motivation as their primary reasons for playing team sports whereas women tend to give higher priority to friendship and social interaction outcomes for participating in sports (Atkins, Johnson, Force, & Petrie, 2013; Eccles & Harold, 1991; Gould, Feltz, & Weiss, 1985; Gill, Gross, & Huddleston, 1983; Kilpatrick, Hebert, & Bartholomew, 2005; Koivula, 1999). There is not yet much research on the origins of these differences, but indications are that both "nature" and "nurture" factors are involved (Vinkhuyzen, van der Sluis, Posthuma, & Boomsma, 2009). Societal gender roles and peer pressure probably play an important role, but recent reviews of the literature (Deaner, et al., 2012; Deaner & Smith, 2013) also indicate that prenatal exposure to testosterone in females is one of the strongest predictors of female interest in sports, especially the more physical team sports. One of the goals of the current studies is to expand what we know about sex differences in the experience of playing team sports.

The current state of affairs may be problematic not only because women are being denied competitive opportunities due to the emphasis placed on men's sports, but also because the experience of playing team sports segregated by sex may promote sexist attitudes that spill over into other parts of life. There is at least some evidence that this may be the case. Team sports have been

shown to promote orthodox forms of masculinity in males, often while promoting sexist attitudes toward women (Anderson, 2005; Burstyn, 1999; Messner, 2002; Muir & Seitz, 2004; Schacht, 1996). Adams, Anderson, and McCormack (2010) noted two types of discourse common in sports that promote masculinity at the expense of women: *masculinity establishing discourse* and *masculinity challenging discourse*. “Masculinity establishing discourse” emphasizes that sports are for men, implying that women’s sports are not important. Examples of such discourse include statements such as “this is a man’s game!” or “If you haven’t got the balls for it, there’s a women’s team you can play on.” “Masculinity challenging discourse” also demeans women. Such discourse can occur when male athletes aren’t playing up to expectations, and coaches or other players attempt to motivate these players by implying that they are playing “like girls.” This discourse reinforces the idea that women are not good at sports and it usually results in increased effort by players who do not wish to be compared with female athletes (Adams, et al., 2010). These two types of discourse are common even at the level of youth soccer teams (Cushion & Jones, 2006).

Thus, it has been suggested that one of the best ways to promote equality in sporting opportunities and enjoyment is to integrate men and women together on the same teams (Kaufman, 2010). There is evidence that men may develop a greater appreciation for women’s leadership skills and gain respect for women as friends and teammates when they have the opportunity to compete alongside females (Anderson, 2008). A problem with assessing the validity of this claim is that there are so few sports in which males and females compete together as a team. One of the few places in which this occurs regularly is in physical education (PE) classes in primary and secondary schools. Koca, Asci, & Demirhan (2005) found that students usually express a preference for the type of PE class with which they are most familiar, with students in all-male or all-female schools expressing a preference for single-sex PE classes and students in coeducational schools expressing a preference for mixed-sex PE classes. Koca et al. also noted that these expressed preferences were more strongly held by girls than by boys. Both male and female students in middle schools appear to prefer single-sex PE classes (Treanor, Graber, Housner, & Wiegand, 1998), with middle school girls in single-sex classes reporting enhanced feelings of physical competence, enjoyment, and effort compared with girls in coed PE classes (Lyu & Gill, 2011). This difference may be due at least in part to the tendency of boys to interrupt and limit the opportunities that girls have to practice and play when the sexes are in the same class (Derry & Phillips, 2005; McKenzie, Prochaska, Sallis, & Lamaster, 2004).

The youth sport that most frequently involves competition with mixed-sex teams is youth soccer, and the little data available indicate the same disruptive effect of the presence of boys on the sporting experience of girls. Gutierrez & Garcia-Lopez (2012) found that girls were

just as involved as boys at the youngest ages, but as the children got older the girls were more likely to behave as spectator-players than boys on mixed-sex teams. The boys seemed more focused on scoring and did not pass the ball to teammates as often as girls did. It is reasonable to assume that less involvement in the game would diminish the competitive enjoyment experienced by girls, and it is yet another goal of our studies to determine the relationship between the enjoyment of competitive games and the experience of being deeply versus marginally involved in games.

In a series of three studies, the enjoyment derived by males and females from competing on same-sex versus mixed-sex athletic teams was explored in an attempt to map the relationship between the enjoyment of a sport and the sense that one is a valuable, contributing member of a team. To accomplish this, we chose to study one of the few sports in which males and females regularly compete alongside each other at the highest levels of competition: Ultimate Frisbee. Based upon data derived primarily from studies in PE classes, we expected to find that women would enjoy competing more on all female teams, and that this enjoyment would be mediated by an enhanced sense of contributing to the team in this environment.

Study 1

Method

Participants.

Ninety-seven male and ninety-two female frisbee players who have played on both a single-sex team and a mixed-sex frisbee teams were recruited for this study. Ages ranged from 15–53 years with a mean age of 24.47. Participants were recruited via e-mail and word of mouth and filled out an online survey.

Procedure.

A snowball sampling technique was used to distribute an online survey to American club and college frisbee players. Most participants were from the Midwestern and Northwestern United States. They were told that we were studying the experiences of players on mixed-sex and single-sex teams in an effort to improve player experiences in both situations. Players were told the survey would take about ten minutes and were asked to share the survey with any players. Only players who had played on both a mixed-sex team and a single-sex team were eligible to participate. The survey included measures of ego and task orientation, the importance of playing well and winning, enjoyment, competitiveness, competence in sports, and perceived personal contribution to the team. Although there are standard measures for many of these constructs, using full-length versions of existing scales would have created a survey that was extremely long, increasing the risk of subjects not finishing it. Consequently, we slightly modified some scales or created our own items in the interest of keeping the survey to an appropriate length. A description of our survey measures is as follows.

**Ego and Task Orientation.* Ego and Task Orientation was measured using The Task and Ego Orientation in Sport Questionnaire (TEOSQ) (Duda, 1989). Task Orientation refers to how much an individual prioritizes improvement and mastery of a skill, while ego orientation measures how much individuals prioritizes being better than others at the task. The TEOSQ is a 13 item scale in which participants indicate their level of agreement on a five point Likert scale. A sample item from the scale is “I am the only one who can do the play or skill”

**Importance of Winning and Performing Well.* Vealey’s (1986) Competitive Orientation Inventory can be used to measure the relative importance of winning and performing well. Gill, Kelley, Martin, and Caruso (1991) have developed a modification of this survey, which has been shown to be just as reliable and less complicated. It consists of only 4 questions in which participants rate their satisfaction in various competitive scenarios on a scale of 1-10. This revised scale was used to measure the importance of winning and performing well. A sample scenario from this scale is “You perform well and lose.”

**Enjoyment.* Enjoyment was measured for both single-sex and mixed-sex teams using a modified version of the Physical Activity Enjoyment Scale (PACES) (Kendzierski & DeCarlo, 1991). PACES is an 18 item scale in which participants rate on a seven –point semantic differential scale how they felt in the moment about the physical activity they had previously engaged in. This scale was modified to rate how participants felt about their experience playing Ultimate Frisbee. A sample item from this part of the survey was “I felt absorbed in this activity I was not at all absorbed in this activity.” Enjoyment was measured by taking the sum of the answers to the PACES questionnaire (after reverse scoring the necessary items).

**Competitiveness, competence, and involvement on the team.* Questions were created to measure competitiveness, competence in sports in general as well as in ultimate frisbee, and how much players believed they had contributed to the team’s success. Three items were used to measure competitiveness, two items were used to measure competence, and four items were used to measure perceived involvement on the team. All items were rated on a one to seven Likert scale.

“Competitiveness” was measured by the following three items:

I find sports enjoyable when I am competing against other players in a competitive environment

I find sports enjoyable when I am playing against other players in a friendly environment (reverse scored)

I was very competitive

Competence was measured by the following two items:

I think I am very talented at sports in general

I think I am very talented at ultimate Frisbee

Involvement was measured by the following four items:

I felt very valuable to the team when I was on the field

I did not feel well utilized by my teammates so that I could best contribute to the team’s success (reverse scored)

I did not make important contributions to the team’s success when I was on the field (reverse scored)

There were very few opportunities when I was open when my teammates did not throw to me

Results

Two 2 (sex of subject) × 2 (same- versus mixed-sex teams) mixed factorial ANOVAs with sexual composition of team as a repeated measure were used to compare the effects of sex and team sexual composition on both enjoyment and involvement. Enjoyment was measured by taking the sum of the answers to the PACES questionnaire (after reverse scoring the necessary items) and involvement was measured by taking the average score of how valuable players felt to the team, how well players felt their team used them, how important players felt to the team, and the players’ perceptions of how few times they were open and not thrown to. The Cronbach’s alphas were calculated for these items, and were found to be strong for *enjoyment* on single-sex teams ($\alpha = .95$) and mixed-sex teams ($\alpha = .96$), and for *involvement* on single-sex teams ($\alpha = .84$) and mixed-sex teams ($\alpha = .88$).

There were no significant main effects of sexual composition of the team on enjoyment, $F(1,187) = .14, p = .71$, or of player sex on enjoyment, $F(1,187) = 1.65, p = .20$, and there were no significant interactions, $F(1,187) = .13, p = .72$. However, there was a significant main effect of the sexual composition of the team on involvement, $F(1,187) = 19.58, p < .001$, of player sex on involvement, $F(1,187) = 4.29, p = .04$, and a significant interaction between player sex and the sexual composition of a team for involvement, $F(1,187) = 44.28, p < .001$. Women felt significantly less involved in mixed-sex games ($M = 16.85, SD = 5.88$) compared with single-sex games ($M = 22.38, SD = 4.84$), although men felt no difference between the two. All means and standard deviations from the ANOVAs can be found in Table 1.

[ID]TBL1[/ID]

Players were asked how much they enjoy playing in competitive and friendly environments. A series of

independent *t* tests showed that men enjoyed competing in competitive environments significantly more than women, $t(187) = 2.231, p = .03$, while women enjoyed competing in friendly environments significantly more than men, $t(187) = 2.480, p = .01$. Refer to Table 2 for all the means, standard deviations, and *t* test results.

[ID]TBL2[ID]

Correlations were also performed on the survey data. Enjoyment and involvement were correlated for men on both single-sex teams, $r(97) = .60, p < .001$, and mixed-sex teams, $r(97) = .37, p < .001$, and enjoyment and involvement were also correlated for women on single-sex teams, $r(92) = .46, p < .001$, and mixed-sex teams, $r(92) = .49, p < .001$. For men, the enjoyment in single-sex games was correlated with enjoyment in mixed-sex games, $r(97) = .28, p < .01$, but this did not hold true for women. Likewise, there was a correlation for involvement between single-sex and mixed-sex games for men, $r(97) = .31, p < .01$, but not for women. Self-perceived Frisbee competence was correlated with involvement for men in single-sex conditions, $r(97) = .45, p < .001$, and mixed-sex conditions, $r(97) = .205, p = .044$, as well as for women in single-sex conditions, $r(92) = .37, p < .001$, and mixed-sex conditions, $r(92) = .31, p = .003$. However, frisbee skill was only correlated with enjoyment for men in single-sex games, $r(97) = .29, p < .01$.

Discussion

It was interesting that women felt so much less involved on mixed-sex teams, given that they enjoyed playing on these teams as much as they enjoyed single-sex teams. It is possible that there were other strong factors contributing to the enjoyment of women on mixed-sex teams, such as mixed-sex teams providing a more interesting social environment. This is the first study to demonstrate that degree of involvement in a game and enjoyment of the experience of playing the game are not always directly related, at least for women.

Intuitively, it would have made sense to predict that the more women enjoy playing on mixed-sex teams, the more they would enjoy playing on single-sex teams, and vice versa. This would make sense as both types of teams play the same game of frisbee, so players who enjoy frisbee more than others would rate both types of teams as more enjoyable than players who don't enjoy playing frisbee as much. However, most women distinctly enjoyed playing on either single-sex or mixed-sex teams, as women's enjoyment while playing on single-sex teams was not correlated with enjoyment on mixed-sex teams. Men showed a statistically significant positive correlation between the levels of enjoyment on both types of teams, indicating that the act of playing Frisbee was a stronger determinant of male enjoyment than the sexual composition of the teams. Similarly, involvement on single-sex teams and mixed-sex teams was correlated for

men but not for women. Whereas men seemed to have mostly been concerned with playing frisbee and were unaffected by their surroundings, women seem to have been more affected by who they were playing with. The original hypothesis that women would enjoy playing on single-sex teams more than on mixed-sex teams was not supported, even though women were less involved on single-sex teams.

Less talented players felt that they were less involved in frisbee games, but this did not seem to affect their enjoyment in most situations. Only men on single-sex teams showed a correlation between their enjoyment and their level frisbee talent. Men on single-sex teams were also the most competitive ($M = 5.85$), followed by women on single-sex teams ($M = 5.45$), men on mixed-sex teams ($M = 5.20$), and women on mixed-sex teams ($M = 5.18$). This may explain why talent was more related to having fun on male single-sex teams than in other conditions. Because men were more competitive on single-sex teams, they enjoyed playing more if they were talented.

One limitation of this study was that it was not a true experiment and the participants were a fairly select group of high-level Frisbee players. Our second study was an attempt to replicate the results of Study One experimentally with a group of players that was more diverse in skill level.

Study 2

Method

Participants.

Thirty-two men and thirty-two women ages 18–23 (mean age = 20.04 yrs.) who were undergraduates at a small American liberal arts college in the Midwest were recruited via campus wide e-mail and through lower level psychology classes and were offered between two and ten dollars for participating in the study. Some participants also received extra credit in lower level psychology classes. One male participant and one female participant were removed from the analysis due to incomplete surveys.

Procedure.

The experimenter told participants that the goal of the experimenter was to see how various factors affect competition. Participants played a four-person versus four-person game similar to Ultimate Frisbee, but used a kickball rather than a frisbee. The game was played in a field house on a court that was 31.5 m long and 11 m wide, with end zones 3.5 m long and 11 m wide. The participants were randomly assigned to teams consisting of either two men and two women or teams that were entirely one sex, and teams played against another team of the same sexual composition. Participants wore large numbers on the front and back of their shirt in order for players to easily identify who was on their team (even numbers played against odd numbers). In the game, players had to catch the ball in an end zone to score, and

could not run with the ball once they caught it. Players would throw the ball from teammate to teammate as the defense tried to stop the offense from catching the ball. If the ball was not caught, the defense gained possession of the ball and attempted to score in the other end zone. Play would continue until a point was scored, at which point the game would reset. Participants were taught how to play and played 20-minute games with a short break after 10 minutes. In the competitive condition, the players on the winning team each won \$10 if their team won and only \$2 if their team lost, while in the recreational condition no team was rewarded for winning; instead, all participants were paid six dollars. All games were videotaped, and in the mixed team condition the number of passes from each sex was recorded and the number of passes to each sex was recorded. Immediately after the game, participants filled out a paper survey in the field house measuring the same variables measured in Study 1: enjoyment, involvement, ego and task orientation, the importance of winning and performing well, competence in sports, and competitiveness.

Results

Two 2 (sex of subject) \times 2 (same- versus mixed-sex teams) factorial ANOVAs were used to compare the effects of sex and team sexual composition on both enjoyment and involvement. Enjoyment and involvement were measured in the same manner as they were in Study 1. Enjoyment was measured by combining the 15 questions in the PACES survey ($\alpha=.95$) and involvement was measured by combining four questions asking about how much players contributed and were used by their team ($\alpha=.77$). There were no significant main effects or interactions of sex, sexual composition of the team, or competitive versus recreational condition on enjoyment or involvement of players. All of the means and standard deviations from the ANOVA can be seen in Table 3. Correlations showed that involvement was correlated with enjoyment for both men, $r(31) = .44, p < .01$, and women, $r(31) = .55, p < .001$. Enjoyment was also correlated with how competitive players felt they were during the game, and this was true for both men, $r(31) = .55, p < .002$, and women, $r(31) = .66, p < .001$. For women, the self-perceived ability in sports was correlated with both enjoyment, $r(31) = .40, p = .02$, and involvement, $r(31) = .58, p = .001$, but there were no such significant correlations for men.

[ID]TBL3[ID]

A Chi Square analysis showed that in the mixed-sex games men were thrown to significantly more often than women, $\chi^2(1, N = 594) = 51.32, p < .0001$. Men threw to men 1.85 times as often as they should have if they were throwing to both sexes equally, and women threw to men 1.87 times as often as would be expected.

Discussion

There are several possible reasons that women felt no difference in involvement between mixed-sex and single-sex teams even though they were thrown to far less on mixed-sex teams. First, women may have had different expectations for being involved on mixed-sex teams. One female participant later stated that she did not expect to be thrown to by men at all, so she felt surprised and happy with the amount she was thrown to in the mixed-sex game. Because there was no direct within-subject comparison between single- and mixed-sex teams (participants only played on one type of team), players may have filled out their surveys based on their expectations for only the gender ratio of the game they were playing in. In Study 1, players filled out their involvement for both single- and mixed-sex teams, so they were actively comparing the two, which may explain why there was a significant difference in involvement for those women. Study 1 also used participants who had actively sought to play their sport, and these players rated their experience playing for a team that they had significant experience playing with. Thus, there was a selectivity factor operating in Study 1 that did not exist in Study 2.

In Study 2, players had only played together for 20 minutes and may not have played enough to have formed a concrete opinion of their experience. A small sample size of individuals with very different levels of athletic ability also may have affected the results. Because there were so many different conditions, 64 individuals may not have been enough to accurately analyze differences between the groups. There were only eight individuals who fit into each different condition, making it difficult to compare any one condition against another. In addition, some individuals were very athletic and understood the game immediately, while others struggled to intuitively comprehend what they should be doing in the game or were so much less athletic than the person they were guarding that they struggled to get involved. It would have been more ideal to play this game with all individuals of comparable interest and skill levels.

Study 3

Study Three was conducted in an attempt to see if the gender disparity in number of passes received during a mixed-sex Frisbee game also occur at the most elite levels of competition.

Method

Participants.

Nine different mixed-sex teams representing the best teams from their countries were observed through five full-length games of Ultimate Frisbee watched via YouTube. All games were played at national tournaments in the United States, Canada, or Australia. All but one of these games were championship games, and all were played between the years 2011–2013.

Procedure.

The senior author of this paper watched five complete games on YouTube. The number of passes from each male and female player was recorded and the number of passes to male and female players was recorded. In addition, the general type of pass (either a throw downfield, a short “dump” throw, or a swing across the width of the field) was recorded as well. All of the throws were recorded when there were four men and three women playing together. Thus, if only the laws of chance were operating, men would be expected to throw to men and women equally often (there were three of each eligible to receive a pass), and women would be expected to throw to men two-thirds of the time, as there would be four male and two female eligible receivers.

Results

A Chi Square analysis showed that men were thrown to significantly more often than women, $\chi^2(1, N = 1441) = 242.51, p < .0001$. Men threw to men 2.50 times as often as they should have if they were throwing to both genders equally, and women threw to men 2.4 times as often as would be expected.

Discussion

As in study 2, men were thrown to much more often than women, and women and men threw to men at similar rates. One factor in ultimate frisbee which was not fully accounted for is that there are two types of positions, handlers and cutters. Cutters function in a similar manner as receivers would in football and handlers function in a role more similar to a quarterback. Handlers tend to be thrown to more often due to the nature of the position, and most of the teams had more male handlers than female handlers. However, it is unlikely that this is the sole cause for the discrepancy in throwing to men so much more than women. It appeared that male cutters were thrown to more often than female cutters and that male handlers were thrown to, although this is more difficult to prove as high level frisbee teams, like the ones that were watched for this study, have more fluid roles between handlers and cutters and an observer cannot always tell who is a handler and who is a cutter. This fluidity between roles also means that the impact of being a handler or cutter should not be as large, as the cutters are sometimes performing the roles of the handlers and vice versa.

General Discussion

Overall, it is apparent that women are not as actively involved in games when playing on mixed-sex teams. Both the video of college players in our experiment and the video of elite Frisbee players in their national tournaments showed that men were thrown to much more often than women on mixed-sex teams, and the survey of female players on American frisbee teams reflected the disparity between playing on mixed-sex and playing on

single-sex teams. Although it is reasonable to assume that women are aware that they are less involved when playing with men, it is interesting that in both Study 1 and Study 2 there were no overall differences in enjoyment for women between single-sex and mixed-sex teams. This suggests that there are other factors affecting how much women enjoy playing. Study 1 also showed that most individual women distinctly enjoy playing Frisbee on either mixed-sex or single-sex teams, whereas men tended to like both experiences equally well. One possible explanation for this difference is that there are some women who are more focused on the social atmosphere of the game and enjoy the “vibe” of mixed-sex teams more, while other women are more concerned about playing and being involved in the game, and therefore enjoy single-sex competitive experiences more. Future studies should look at possible differences between men and women in the sources of the rewards derived from competition.

It was hypothesized that men would be thrown to more than women in Studies 2 and 3. This hypothesis was supported, and male and female throwers were equally responsible for this disparity. In Study 2, college men threw to men 1.85 times as often as expected and college women threw to men 1.87 times as often as would be expected. Elite Frisbee men threw to men 2.5 times as often as would be expected and elite Frisbee women threw to men 2.4 times as often as would be expected. Even though it was hypothesized that women would throw to men more than to other women, it was expected that this difference would be much smaller than the difference of men throwing to men more often than women. In the Introduction, it was noted that men may have a distrust of women in physical activities (Browne, 2012) and that this mistrust could lead men to throw to women less often. This would not explain, however, why women throw to women less often. It would be interesting to pursue this question with young children to see how early this bias favoring males appears in boys and girls. One must not discount the possibility that the difference in throwing rates may not just be due to gender bias, but it may also reflect an optimal strategy if in fact the men are the better players. Rules stipulating that a minimum number of women (but not men) must be on the field at all times may be a tacit recognition that this is probably the case.

One positive finding from our research was that men and women enjoyed playing ultimate frisbee equally. Carroll and Loumidis (2001) found that girls have less enjoyment of physical education classes than boys, but this difference was not seen in female Ultimate players on either single- or mixed-sex teams. There may be a self-selection bias, as female students have no choice about whether they participate in physical education class while female Ultimate players *do* have a choice in whether they play Ultimate. It may be that the women who choose to play Ultimate generally come from the group of girls who used to enjoy physical education classes more. However this self-selection bias would not apply to the female college students in our experiment (i.e., Study 2) who also enjoyed playing the game just as much as men did.

It is difficult to decide whether the findings of our studies should be considered positive or negative for having female and male athletes compete together. On one hand, the fact that both women and men enjoyed playing on mixed gender teams just as much as they enjoyed playing on single gender teams is a very positive sign, as enjoyment is the reason most people play sports. However, in Study 1 female frisbee players felt less involved on mixed-sex teams and Studies 2 and 3 showed that these female players were less involved on mixed-sex teams as well, which is not encouraging. It has already been shown that women are more motivated by friendship and social interactions to play sports (Gould, Feltz, & Weiss, 1985; Gill, Gross, & Huddleston, 1983), which is probably the reason women playing Ultimate could feel less involved while playing with men compared with only playing with women but still enjoy playing on mixed-sex teams just as much. Our research highlights yet another way in which gender is an issue in sport and that simply creating more mixed-gender sports will not be the panacea that some have hoped for. Further research needs to tease out the factors that will enhance the experience of athletic competition for men and women alike.

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Table 1 Means and Standard Deviations for Enjoyment and Involvement of Frisbee Players in Study 1

Scale	Single-Gender Teams			Mixed-Gender Teams	
	N	M	SD	M	SD
Male PACES	97	101.99	16.61	100.77	19.16
Female PACES	97	103.91	18.22	103.89	16.54
Male Involvement	92	20.27	5.18	21.38	5.20
Female Involvement	92	22.38	4.83	16.85	5.88

Table 2 Means and t-Test Results for Frisbee Players in Study 1

Scale	Male (N = 97)		Female (N = 92)		t Value	p Value
	M	SD	M	SD		
Enjoys playing sports in competitive environment	6.28	.997	5.91	1.246	2.231	.027*
Enjoys playing sports in Friendly environment	5.86	1.275	6.26	.936	2.480	.014*
Perceived talent at sports	4.76	1.398	4.48	1.355	1.420	.157
Task Orientation	4.16	.711	4.37	.522	2.309	.022*
Ego Orientation	2.56	.813	2.32	.783	2.106	.037*

p < .05

Table 3 Means and Standard Deviations for College Student Players in Study 2

Scale	Male (<i>N</i> = 16)		Male (<i>N</i> = 15)		Female (<i>N</i> = 15)		Female (<i>N</i> = 15)	
	Single-Gender		Mixed-Gender		Single-Gender		Mixed-Gender	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
PACES	95.75	20.63	101.47	16.83	95.33	20.02	98.33	18.75
Involvement	20.75	4.77	22.00	3.87	21.13	5.29	20.53	4.60
Felt competitive during game	5.13	1.67	4.87	1.46	5.07	1.91	5.13	1.25
Enjoys sports in competitive environment	6.13	1.36	6.13	.99	4.80	2.11	4.73	1.53
Enjoys sports in friendly environment	6.00	.97	6.53	.92	6.07	.96	5.94	1.03
Perceived talent at sports	3.81	1.68	4.07	1.39	3.27	1.62	2.80	1.32
Task orientation	3.89	.88	4.20	.57	4.01	.84	4.08	.88
Ego orientation	2.44	.89	1.97	.46	2.48	1.02	1.89	.98

Author Queries

[AUQ1] Reference "Ifedi, 2008" is not cited in the text. Please add an in-text citation or delete the reference.