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Ultimate Frisbee Design

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Background

   As the newly appointed captain of the Women's Ultimate Frisbee Team for Grand Valley

State University, I realized that there was little that I knew about running an Ultimate Frisbee

team. As a team, we had not experienced particularly successful seasons in the past, but they

were definitely fun and we had great team dynamics. Over my final season as captain, I wanted

to create a successful team that was able to win games and tournaments, get along well and have

fun. In order to find the information most relevant to creating a successful team, I needed to

gather and analyze the data myself. This analysis is specific to the needs of a college Ultimate

Frisbee team, but I hope that all teams can utilize this research to better understand the influences

of team success in terms of both tournaments and team dynamics.

   Ultimate Frisbee is a team sport involving a frisbee, and 14 players on a field at a time.

There are 7 players per team on the field. There are two main offensive positions; handlers and

cutters. Handlers are similar to quarterbacks, they are normally the most accurate at throwing

the frisbee. Cutters are often the speediest players, and they do a lot of running. It is their job to

get open in order to receive the frisbee from the handlers. Their movement is essential to

moving the frisbee up the field and to the endzone. There are several different types of offenses,

and defenses, which I will not get into great detail. The most important things to know about

Ultimate Frisbee is that it involves a great deal of practice and running to be a strong team. Once

an individual catches the frisbee, they are not allowed to move, but everyone else can still move.

After throwing the frisbee, the person is able to move again. To get a point, your team must

catch the frisbee in the endzone that you are attacking. A turnover is caused when the frisbee

touches the ground, and possession of the frisbee switches to the team that was previously on

defense.

Research Objective

The objective of the research that I conducted was to discover the most effective way to run a successful college Ultimate Frisbee Team. I wanted to find out the best way to incorporate conditioning, practices, team dynamics, and tournaments to create a successful team. I determined a successful team as one that worked well as a group and was happy with their tournament results.

Hypotheses

I believed that the success of an Ultimate Frisbee team would be based on how much team members liked each other. The more they liked each other, the better they would perform as a team. I also believed that an increased devotion to conditioning would create a better performing team. I thought that pairing conditioning with practices would also be more effective than having conditioning separate from practice, or to make players condition on their own time in accordance with their schedule. Another hypothesis that I had was that teams were more satisfied with their teammates if they won tournaments.

Topics Measured

In order to create a plan that would apply to all Ultimate Frisbee teams, I had to gather several types of information. The topics measured by the research were:

- The types of teams the respondent played on; women's, men's, or mixed.

- Leadership roles of the teams the respondent played on

- How long the respondent had been involved in Ultimate Frisbee

- A ranking of the team dynamics on the field, off the field, and overall

- How clearly the following were communicated; practices, tournaments, social events and conditioning

- Factors that affected practice attendance

- How practice times were set

- If practice included conditioning

- If conditioning was considered to be effective

- Types of activities conducted during conditioning

- Number of tournaments played per season

- Satisfaction in regards to the following aspects of a tournament: team performance, individual performance, tournament results, transportation, organization, and cost of tournaments

- Average tournament cost

- What the respondent liked most about their team

- What the respondent liked least about their team

- Employment Status

- Age

- Gender

- Income Range

Sample and Data Collection

To gather the data required for research, a survey was created using an online survey portal, Qualtrics. The survey consisted of questions including topics such as team dynamics, conditioning methods, tournament organization, and team layout.

The survey was first distributed through e-mail. An e-mail was sent to all captains of teams who had previously participated in a local Ultimate Frisbee tournament, Huckfest. One week later, I asked the men's and women's Ultimate Frisbee teams of Grand Valley State University to take the survey. Being able to directly contact these members significantly increased the numbers of surveys taken. After two weeks, the number of surveys completed slowed and stopped. At this point, I only had about 60 of the 100 required respondents to receive accurate data. I had to think of a new means of distributing the survey. I decided to ask Five Ultimate Frisbee, the top brand name in Ultimate Frisbee gear and apparel, if they could distribute the survey to customers. They immediately posted the link to the survey on their Twitter feed and within two hours I more than doubled the number of surveys that were necessary to receive a proper sample of the population. The number of surveys completed jumped from 60 to over 200. This distribution method allowed me to receive data from respondents all over the country, and maybe all over the world. The survey did not ask where the respondent's location in order to preserve their anonymity.

The convenience sample resulted in 244 completed surveys which were used for data analysis. A non-probability method was used in order to access Ultimate Frisbee players. I determined this to be the best method to receive results from Ultimate Frisbee players. I was unable to receive an estimate of the size of the total population of Ultimate Frisbee players,

which is why it was necessary to draw a convenience sample. It was most convenient for me to access Five Ultimate's customers and local teams than it was to find all of the collegiate Ultimate Frisbee teams. Even if I had been able to access every single collegiate Ultimate Frisbee team, I would have to create a truly random selection process to distribute the survey using a probability sampling technique. This information will be used to draw a conclusion for the population of interest; collegiate level Ultimate Frisbee teams.

Data Analysis

Demographics

The ages of respondents were skewed greatly to the left side, with a few outliers. A huge number of the respondents (78.6%) were in the 18-24 age bracket, 15.4% in the 25-30 age bracket, 4.3% in the 31-36 age bracket, 0.9% in the 37-42 age bracket, 0.4% in the 43-48 age bracket, and 0.4% in the 49 and Older age bracket. (See appendix, Figure 1). There was also an overwhelming ratio of men to women: with 79.5% of all respondents were men, and 20.5% of respondents were women. (See appendix, Figure 2).

The annual income of respondents was also skewed to the left side of its graph, with 71.9% of all respondents' income below $20,000. About 86.8% of all respondents had an annual income of less than $50,000. (See appendix, Figure 3). Of the 244 respondents, 146 indicated that they were full-time students (59.8%), 11 indicated that they were part-time students (5%), 66 indicated that they were working full-time (27%), 61 indicated that they were working part-time (25%), 12 indicated that they were unemployed (5%), and 2 indicated they had an employment status of "other" (1%) (See appendix, Figure 4). The two members of the "other" category stated that they had either retired or stated their occupation as a stay-at-home mom. I expected the

results to be skewed towards full-time student status, low incomes and young ages. This suggests that most Ultimate Frisbee players are still in college or are recently graduated from college, which explains the skew towards low income and young age witnessed in the data.

Leadership Roles

The respondents were asked to select all of the types of leadership that they had experienced on an Ultimate Frisbee team. Did they have a captain as their leader? A coach? This question was important to help determine who normally is in charge of an Ultimate Frisbee team. Approximately, 63% of the 244 respondents had captains, 19% had an Intramural leader (similar to a captain), 16% had a President, 32% had no leadership, and 11.5% had other forms of leadership (see appendix, Figure 5). The respondents were asked to explain their choice if they selected "Other leadership". The "other" forms of leadership were organizers, coaches, vice presidents, treasurers, officers, an executive board, co-captains, founders, spirit captains, tournament directors, travel coordinators, fitness coordinators, and club committees.

Team Dynamics

In regards to team dynamics the respondents were asked how they got along with their teammates on the field, off the field, and overall. An answer of 1 was equivalent to "very poor", while an answer of 7 was equivalent to a response of "very good". The mean for team dynamics on the field was 6.34, and the mean for team dynamics off of the field was 6.32 (See appendix, Figure 6 and 7). A mean of 6 indicates that the respondents felt that their team dynamics were "somewhat good". After running a paired sample t-test, I frisbeeovered that there was not a

statistically significant difference between how well the respondents got along with their teammates whether they were on or off of the field (t = 0.308, p = 0.759).

Communication

A majority of respondents stated that the time and schedule of their teams were very clearly communicated. An overwhelming 98.7% of respondents stated that the timing and scheduling of practices were clearly communicated, 97% stated that tournaments were clearly communicated, 89.9% said that the team social events were clearly communicated, and 81.4% said that conditioning was clearly communicated.   This shows that most respondents were very well informed of all events occurring for the team, but less informed in regards to conditioning. The communication between team leaders and players could impact the team dynamics.

Conditioning

In regards to conditioning, 80.9% of respondents stated that practice included conditioning, and 88.8% of respondents said that they found conditioning effective. This indicates that conditioning is very effective to Ultimate Frisbee teams, and should be implemented by all Ultimate Frisbee teams.

Practices

In regards to practice, the data shows that most respondents were fully aware of practice times. I have found that even when individuals are aware of practice times, they may not be able to attend practices for a variety of reasons. The goal of asking this question was to determine

what most impacts an individual's practice attendance. Respondents were asked to rank the

following from most likely to affect practice attendance to least likely, (1 = most likely to affect

practice attendance, 6 = least likely to affect practice attendance). Of the following: homework,

friends, practice being at an inconvenient time, tournaments, lack of desire to attend and "other",

practice attendance was most affected by homework (mode = 1). The other factors in order from

second most likely to impact practice attendance to least likely to impact practice attendance

were: practice at an inconvenient time (mode = 3), tournaments (mode = 3), friends (mode = 4),

lack of desire to attend (mode = 5), and other (mode= 6) (See appendix, Figure 8). A few

examples of "other" reasons for not attending practice included: exhaustion, work, family,

injuries, and prior commitments. Practice times were only set around players' schedules 12.3%

of the time, which meant that 78.8% of the time the practices were predetermined and unable to

be changed for team members. The high rank of homework reveals that school is a priority for

Ultimate Frisbee players, and it might be beneficial for college players to set up study hours.

The team could meet in a library or study room during set hours to help them focus on their

homework. These study hours could be used to help players get their school work done and still

have time to practice Ultimate Frisbee. Since a majority of the time practices are predetermined,

it is important for players to be aware of the times when they might have practice and attempt to

finish homework and other tasks by the time practice starts.

Tournaments

A majority of tournaments are played during the months of January-April and September-

December. The college season is during the months of January-April, and the club season is

during the months of September-December. The college regular season is the season during

which players on a collegiate team compete with other college teams. The club season includes

an entirely different set of final tournaments that is dedicated only to teams that compete on a semi-professional level. The club season is ideal for bringing back alumni for college teams, and preparing college teams for the college season. During the months January, February, March, and April, 52.4% of correspondents play in 3-5 tournaments and 38.6% play in 0-2 tournaments. During the summer months (May-August), 52.8% of respondents play in 0-2 tournaments, while 39.1% play in 3-5 tournaments. In September-December, the numbers switch again, with 41.5% playing in 0-2 tournaments, and 55.5% playing in 3-5 tournaments (See appendix, Figures 9-11). These seasons also correspond with semesters at Grand Valley State University, and many other universities. Based on this data, I believe that it would be most beneficial if a team were to compete in 3-5 tournaments during each semester, while continuing to compete during the off-season (months May –August). Many cities have summer leagues that are great ways to continue to improve one's skills during the college offseason.

About 42.6% of respondents were satisfied with their team's performance during tournaments, and an additional 32.6% were somewhat satisfied with team performance during tournaments. I found this interesting after looking at the data regarding the respondents' satisfaction in regards to tournament results (whether they came in 1st Place, 2nd Place, etc.). I ran a paired samples t test to see if there was a difference in the means between team performance and tournament results. I found that there was a statistically significant difference between satisfaction in regards to team performance and satisfaction with tournament results (t = -8.142, p= 0.000). From this t test we can assume that an individual was more satisfied with their team performance (mean = 5.23) than their tournament results (mean = 4.60). Only 28.4% of respondents were satisfied or very satisfied with the tournament results. An additional 64.6%

were somewhat satisfied, neutral, or somewhat dissatisfied, while 7% was either dissatisfied or very dissatisfied.

Most tournaments were reported by respondents to be well organized, and of a reasonable cost. On average, about 51% of respondents paid $21-$60 for each tournament (See appendix, Figure 12). This cost included bid fees, travel costs, hotel rooms, and food. About 58.8% of respondents were at least somewhat satisfied with the tournament costs that they experienced. Personally, I tell my teammates that the tournament will cost at most $80, so to me this is a reasonable response. We have a very small team, which affects the price of tournaments, as fees are split amongst 10 people instead of 20.

Conclusion

A majority of people who play Ultimate Frisbee are ages 18-30 and have a very low income. This is important to keep in mind when developing a team strategy. Practices and tournaments need to be set up to benefit the busy schedules of college players with little extra money to spend. The team leader is often a captain instead of a coach like in other organized sports. This is a trend that is shifting as Ultimate Frisbee becomes a more well-known and developed sport. The demand for coaches increases as the game develops.

It is important that the teammates of the team get along with each other, on and off of the field. This helps the team develop and grow. A huge part of team dynamics is communication. Being notified of practices, social events, and tournaments helps the team stay connected and allows all team members to be on the same level. The players will better understand what the team leaders expect from their team with strong communication.

Conditioning is a very effective means of improving endurance and should be a part of practice. It is much harder to do conditioning on your own than in a group setting (I can attest to this from personal experience). Since most practice times are already predetermined, teams should add the conditioning to the beginning or end of practice. This prevents players from opting out of conditioning with excuses in regards to their busy schedules or not having time to go to the gym and condition.

The ideal number of tournaments per semester is 3, 4, or 5. This does not overwhelm the team with tournaments, but gives the team exposure to competition, playing styles, and in-game opportunities to learn. Teams can then gain the experience to play better as a unit. The team leader(s) should try to keep costs of tournaments between $41 and $60 in order to see maximum attendance at tournaments keep players satisfied, while maintaining reasonable expectations in regards to cost.

A team's satisfaction during a tournament is not based entirely on their performance, but also on their results. Conditioning is a key factor in creating better results as well as stronger performance.

Using my suggestions based on the research, I believe that all college teams will be able to make great strides. Implementing my strategies will help teams grow together and perform better when they compete.

Appendix

Figure 1
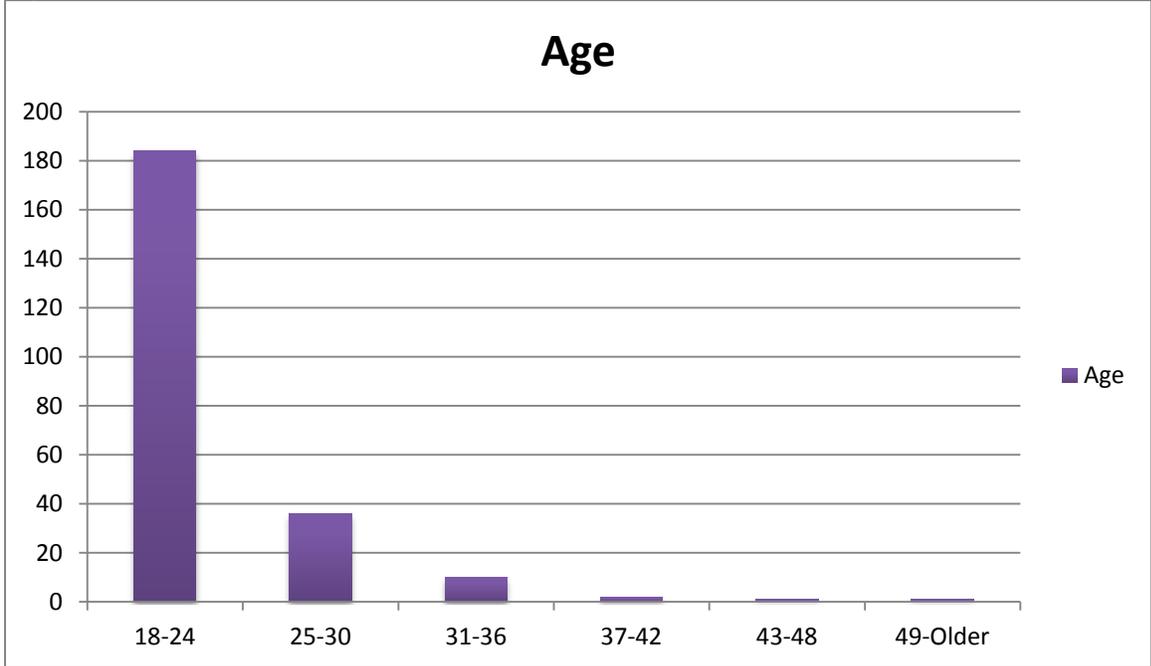
Age

*Vertical axis indicates number of respondents who selected a particular answer.
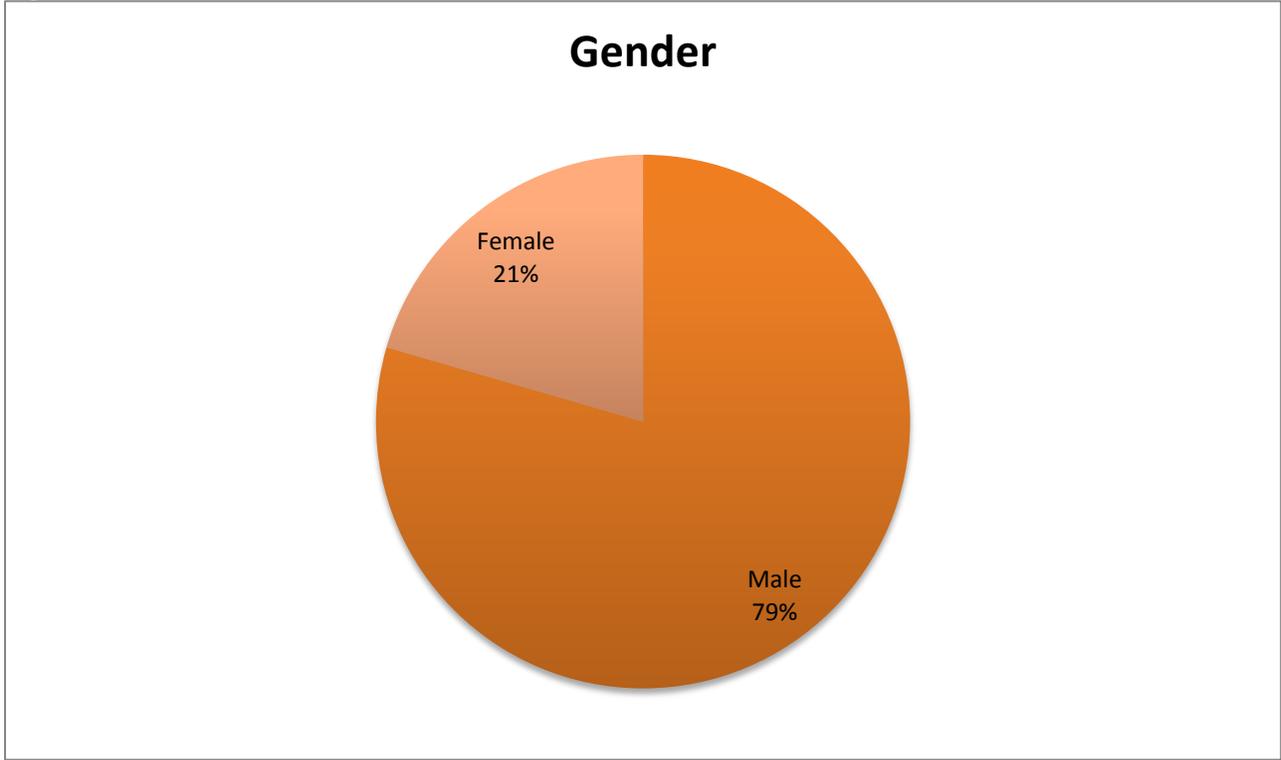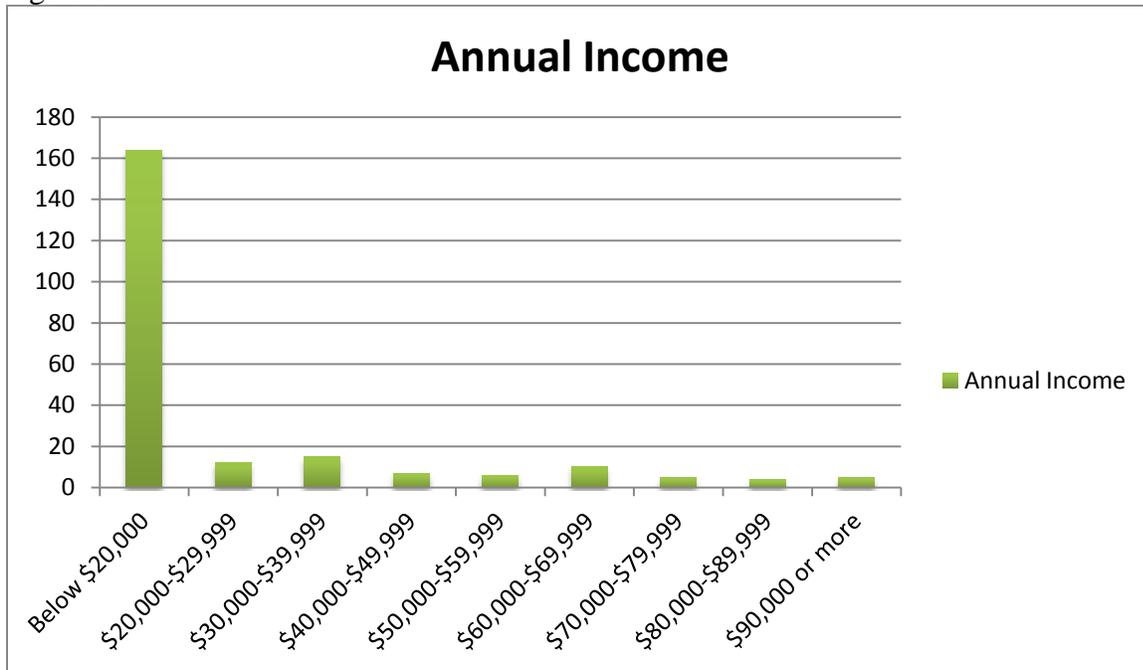
Figure 2

Gender

Figure 3

Annual Income

*Vertical axis indicates number of respondents who selected a particular answer.

Figure 4

Employment Status

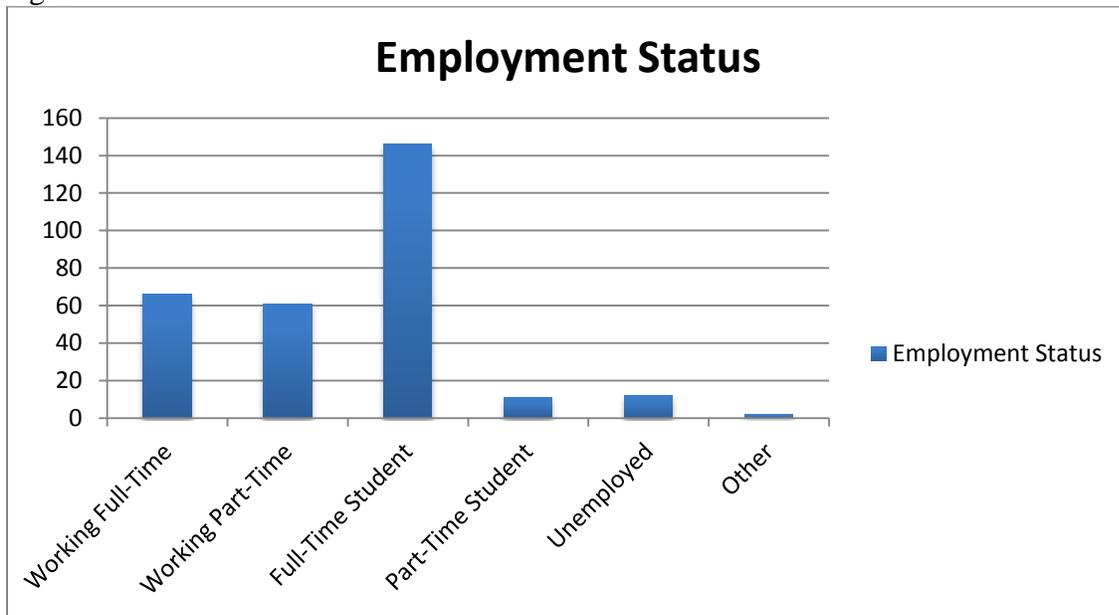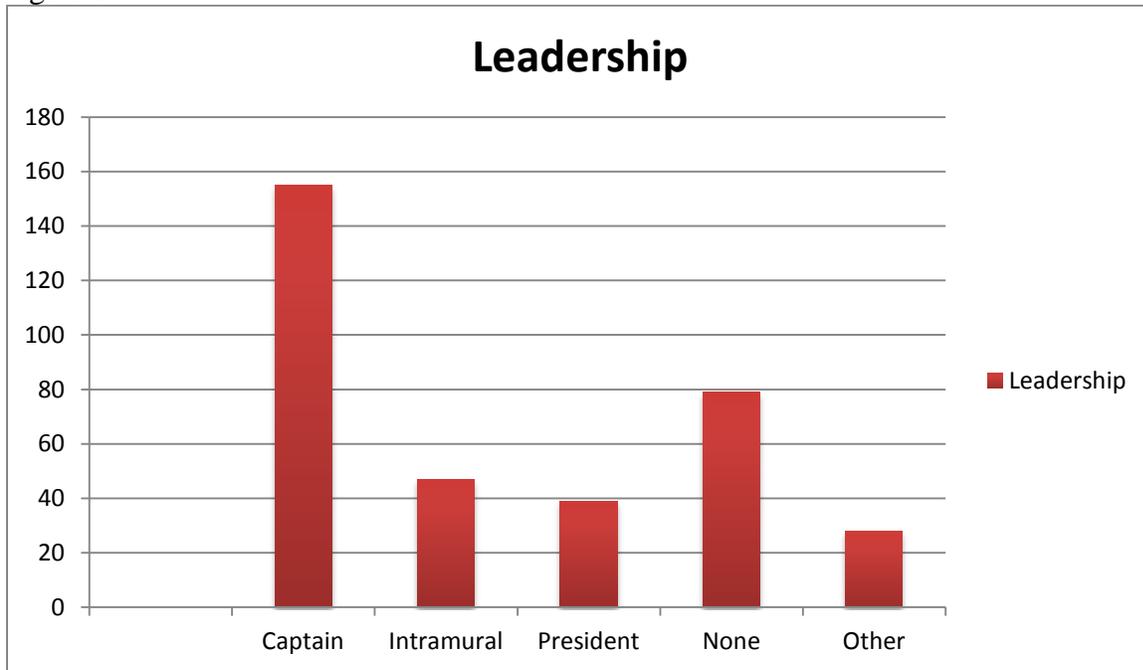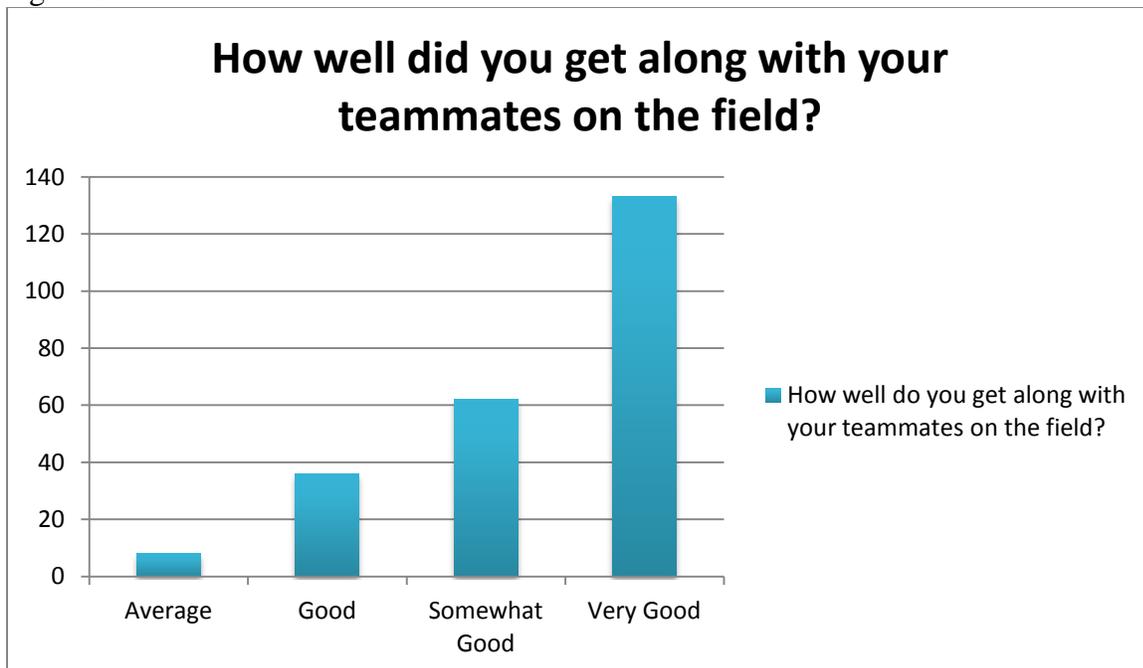*Vertical axis indicates number of respondents who selected a particular answer.
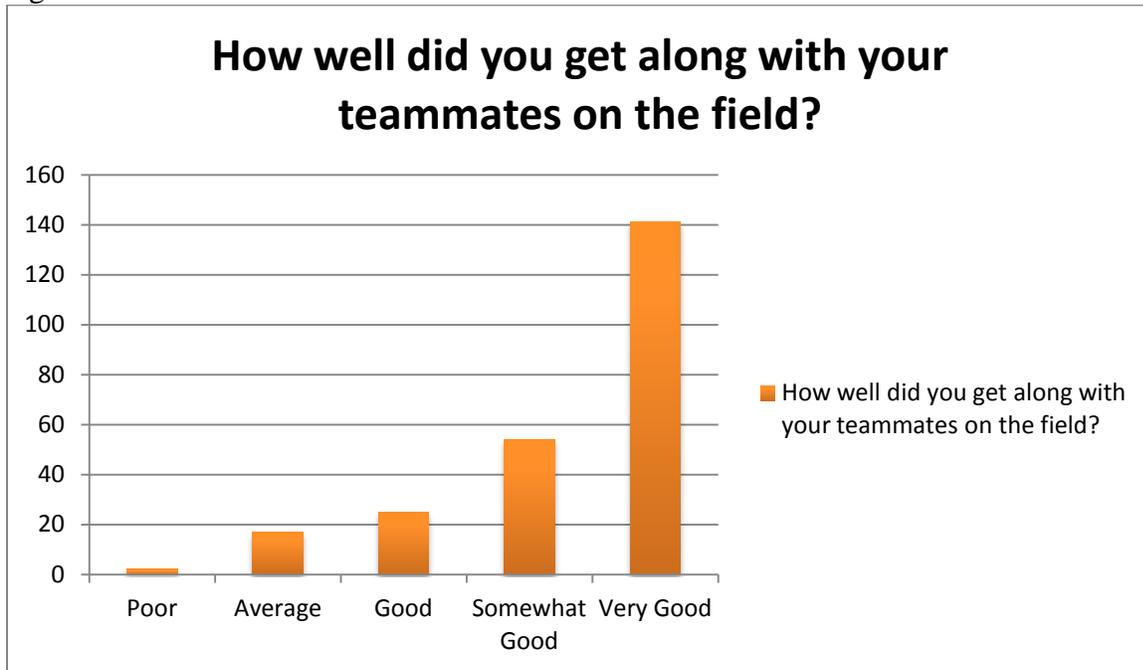
Figure 5

*Vertical axis indicates number of respondents who selected a particular answer.

Figure 6

*Vertical axis indicates number of respondents who selected a particular answer.

Figure 7

How well did you get along with your teammates on the field?

*Vertical axis indicates number of respondents who selected a particular answer.

Figure 8

Factors Affecting Practice Attendance						
Factor	Homework	Practice Time	Tournaments	Friends	Lack of Desire to Attend	Other
Mode	1.0	3.0	3.0	4.0	5.0	6.0

Figure 9

On average, how many tournaments do you play in during January-April?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-2	90	36.9	38.6	38.6
	3-5	122	50.0	52.4	91.0
	6-8	21	8.6	9.0	100.0
	Total	233	95.5	100.0	
Missing	System	11	4.5		
Total		244	100.0		

Figure 10

On average, how many tournaments do you play in during May-August?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-2	124	50.8	52.8	52.8
	3-5	92	37.7	39.1	91.9
	6-8	16	6.6	6.8	98.7
	9+	3	1.2	1.3	100.0
	Total	235	96.3	100.0	
Missing	System	9	3.7		
Total		244	100.0		

Figure 11

On average, how many tournaments do you play in during September-December?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-2	98	40.2	41.5	41.5
	3-5	131	53.7	55.5	97.0
	6-8	6	2.5	2.5	99.6
	9+	1	.4	.4	100.0
	Total	236	96.7	100.0	
Missing	System	8	3.3		
Total		244	100.0		

Figure 12
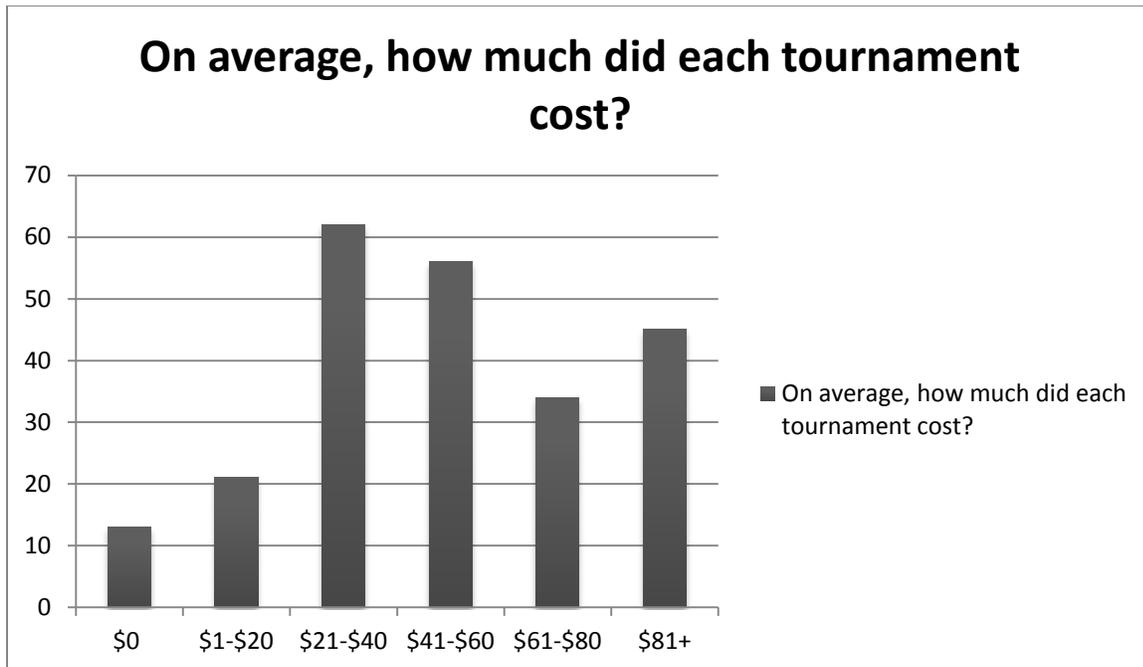
*Vertical axis indicates number of respondents who selected a particular answer

References

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