2020 NCVF Varsity Interest Survey Report

December 26, 2019

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Prologue: An Overview of the NCVF and Its Participants

Introduction

The purpose of this survey is to give an organized source to better help shape future changes to the NCVF rules. It measures the current demands from collegiate clubs based on player demographics and club opinions.

The National Collegiate Volleyball Federation, or NCVF, provides opportunities for collegiate students not playing at the intercollegiate level. However, not all players interested in playing have the same athletic background. Most NCVF players do not have any form of intercollegiate experience other than their club play in the NCVF.

The players who are an exception to this case are former intercollegiate athletes, classified as "Varsity" players by the NCVF. The background of these athletes varies, from community college leagues such as the NJCAA and CCCAA, to university leagues such as the NCAA. Entering the 2020 season, the current NCVF rule limits teams to a maximum of 2 Varsity players per team. The rule is intended to prevent an unfair advantage from schools who have the most Varsity players.

The rule has evened out the overall level of competition in the NCVF, but it has been considered unfair by some, mainly by Varsity level players, unable to play due to the Varsity rule's player limitation. Those who disagree with one or more aspects of the current rule argue that the rule wrongfully classifies certain players, and inhibits the growth of competition in the NCVF.

While the survey mainly analyzes demands from Varsity level players, the survey also analyzes the opinions on league expansion, "open" to Varsity and Non-Varsity level players alike. One question is particular asks if schools would be interested in having an "Open Division", where teams in this division can have an unlimited amount of Varsity players per team. While the main purpose of this league would be to provide a division for Varsity players, its purpose is to allow more players, Varsity and Non-Varsity alike, an additional division of competition.

The goal is to give collegiate clubs a reliable source to use when voicing their opinions and suggestions. As a college student myself, I want to help fellow college students, present and future, compete in the sport I have grown up with and loved. It is amazing that there is a club league that provides for so many college volleyball fanatics. The following data is available to download on GitHub (under profile "jakesimon2") for legitimacy, and the analysis reflects the results collected from the data.

League and Conference Demographics

According to the official league website, the NCVF consists of 9 women's conferences and 14 men's conferences. As of the 2019 season, the league has 384 men's teams and 220

women's teams registered, including independent teams, with an average of 27.4 and 24.4 teams per conference for men and women respectively.

Southern California Collegiate Volleyball Conference (SCCVL)

The SCCVL consists of 31 and 25 teams for men and women respectively, as of 2019. Out of these teams, 19 and 21 teams participated in this rendition of the survey, making up 61% of the men's team population, and 84% of the women's team population. Since this is the first instance of this survey, there is currently no data to mark trends in participation. All SCCVL schools in this survey are from California. However, not all universities participated in the survey for both genders; some schools only provided information for their women's program, while others only provided information for their men's program.

The distribution of college types for men goes as follows:

University of California (UC) = 4
California State University / Polytechnic (CSU / Cal Poly) = 6
Private University / Other = 2
Total = 12.

The distribution of college types for women goes as follows:

University of California (UC) = 3
California State University / Polytechnic (CSU / Cal Poly) = 5
Private University / Other = 5
Total = 13.

New England Collegiate Volleyball League (NECVL)

The NECVL consists of 38 teams for men only, as of 2019. Out of these teams, 1 participated in this rendition of the survey, making up 3% of the men's team population. The one team in this survey from the NECVL is from Rhode Island. The Community College of Rhode Island (CCRI) is a public two-year institution.

Chapter 1: Player Make Percentage - Varsity and Non-Varsity Players

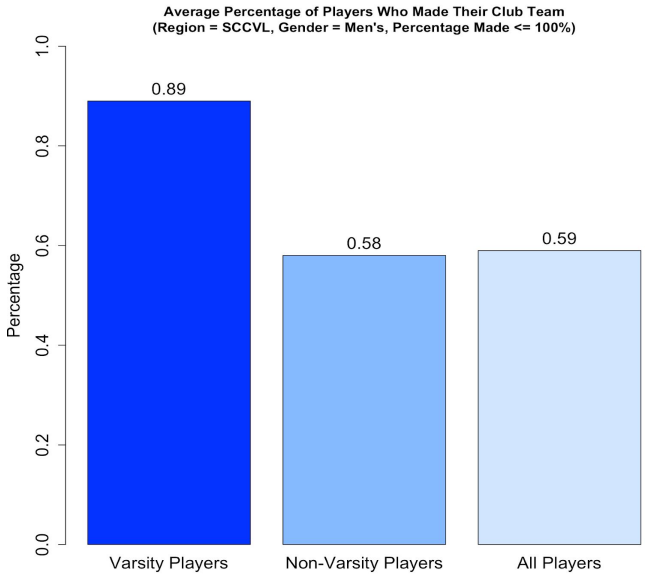
Section 1A: Non-Varsity, Varsity, and Overall Make Averages

The following section compares how many players get cut from their team based on Varsity and Non-Varsity status. The first hypothesis is that a greater proportion of Varsity players are cut in comparison to their Non-Varsity counterparts. The second hypothesis is that less than 75% of players make their school's club team. To measure these hypotheses, four variables are taken into account from each school: the maximum number of overall spots available, the maximum number of Varsity spots available, the number of Varsity players trying out, and the number of Non-Varsity players trying out. From this data, we can calculate the percentage of Varsity and Non-Varsity players who made their school's team, in addition to the percentage of all players who made their team. A bar graph is formulated with three bars representing each calculation. Each region's data has been separated to compare the make percentages amongst regions.

Men's Club Programs

(Region = SCCVL)

As of November 15th, 2019, the SCCVL had 12 schools participate in the survey. Based on their player data, schools from the SCCVL conference have a Varsity make percentage of 89%, and a Non-Varsity make percentage of 58%. Since volleyball is an official men's sport in the California Community Collegiate Athletic Association (CCCAA), the expected outcome was in favor of the first hypothesis. However, based on a 95% confidence interval, we must disprove the first hypothesis. Despite the much higher Varsity make percentage, the overall average make percentage is 59%, proving the second hypothesis, that less than 75% of all players make their team, based on a 95% confidence interval. Based on the given results, every 2 out of 5 players are cut from their program.



Graph 1

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(Region = NECVL)

As of November 15th, 2019, the NECVL had 1 school participate in the survey. Based on their player data, schools from the NECVL conference have a Non-Varsity make percentage of 88%. Varsity percentage could not be calculated with the data given, so the NECVL will not be included in Chapter 2 of this report. In addition, the NECVL cannot prove or
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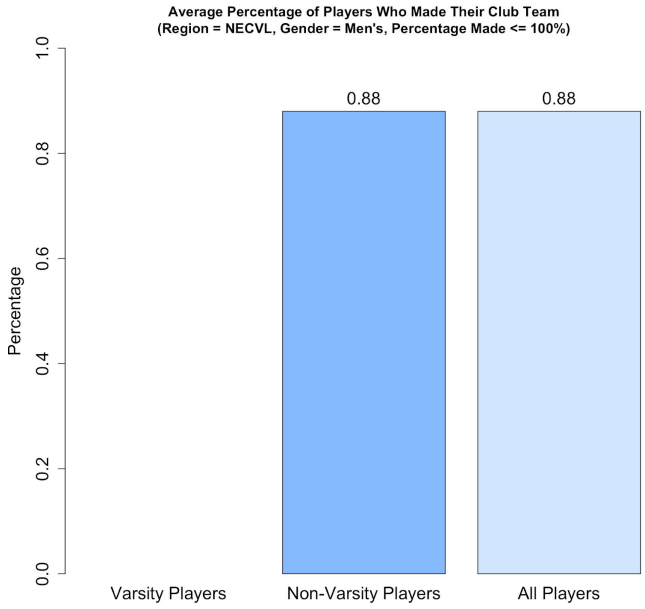
disprove the first hypothesis, because there are no Varsity players in this conference based on this information. The overall average make percentage of players from schools in the NECVL conference is 88%. Based on the results given, about 1 out of 10 players are cut from their program.



Graph 2

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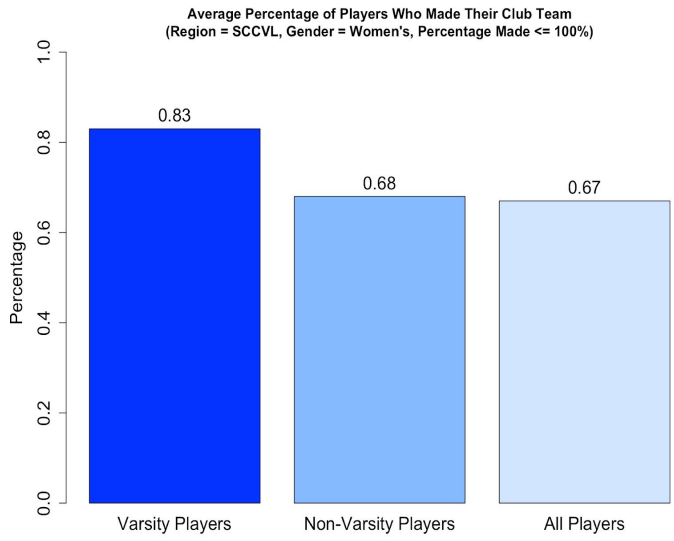
Women's Club Programs

(Region = SCCVL)

As of November 15th, 2019, the SCCVL had 13 schools participate in the survey. Like the men's division, more Women's Varsity players in the SCCVL were expected to be cut, because volleyball is an official women's sport in the California Community Collegiate Athletic Association (CCCAA). Based on player data, schools from the SCCVL conference have a Varsity make percentage of 83%, and a Non-Varsity make percentage of 68%. Based on a 95% confidence interval, the results disprove this and the first hypothesis, because 15% more Varsity players make their team than Non-Varsity players. The overall average make percentage of players from schools in the SCCVL conference is 67%, proving the second hypothesis, that less than 75% of players make their school's team, with a 95% confidence interval. Based on the given results, 3 out of 10 players are cut from their program.



Graph 3

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Section 1B: Number of Players Trying Out Based on the Number of Teams Represented by That School

The purpose of Section 1B is to represent the distribution in players trying out versus the maximum number of spots allocated to a team. Each school is split into two categories: schools with 1 team, and schools with 2 or more teams (the only school with more than two teams was CSU Fullerton's Women's program with 3 teams). The following data measures the data in two ways: box plot and histogram.

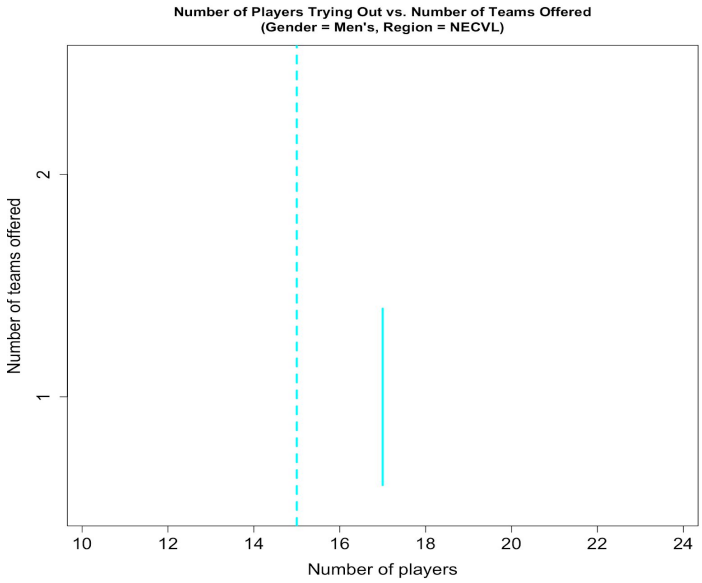
The box plot depicts the number of players in five key elements: the median as the

center line, first and third quartiles as the outer lines of the box, and maximum and minimum values as whiskers outside the box. The closer enough spots for all interested students. Each gender and region has their own box plot graphs to show the trends for their respective categories.

The histogram depicts the frequency of the players trying out within the same range of 5 players (i.e.: 15-20, 20-25, etc.). The dotted line marked at 15 and 30 players for each category respectively shows the maximum number of spots available for a school with 1 or 2 teams. The further the highest bars are from the dotted line, the higher the average amount of players trying out per school is. In addition, there is a bell curve, a distribution curve, which depicts where the frequency of players in terms of magnitude on the y-axis (frequency).

the first three values are to the dotted line (representing the maximum number of spots), the greater the percentage of schools who have

(Region = NECVL) (Graph 5)



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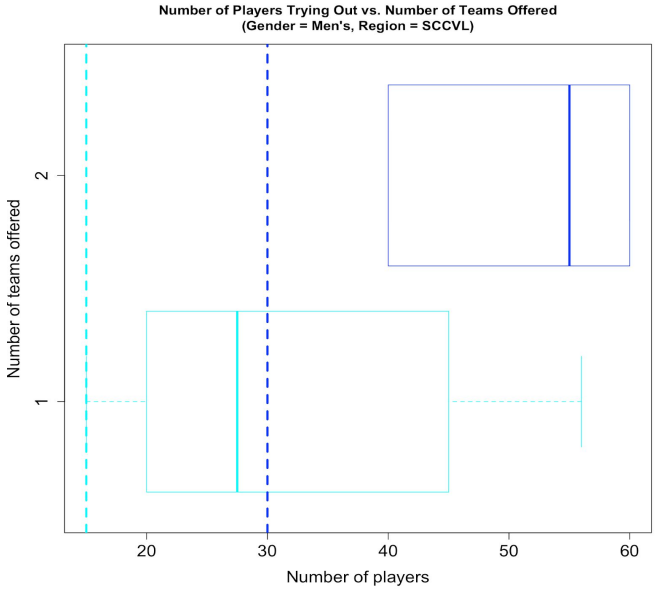
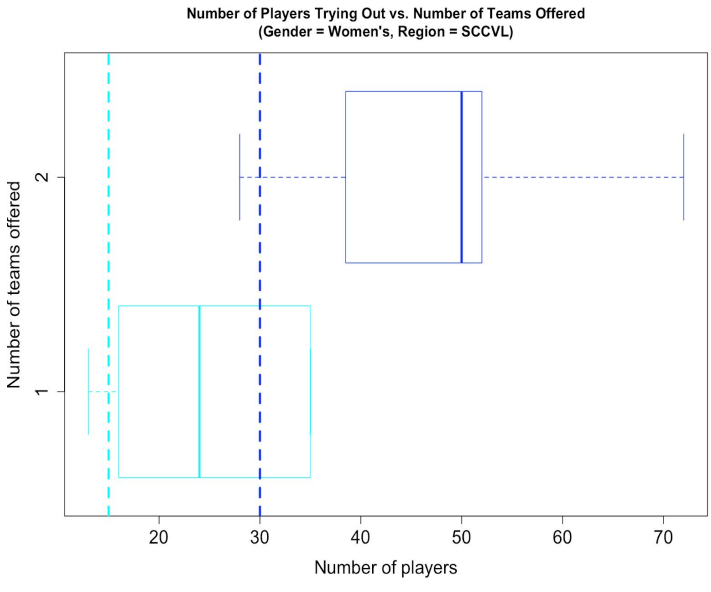
Boxplots for Men's Section

(Region = SCCVL) (Graph 4)



Boxplot for Women's Section

(Region = SCCVL) (Graph 6)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Histograms for Men's Section

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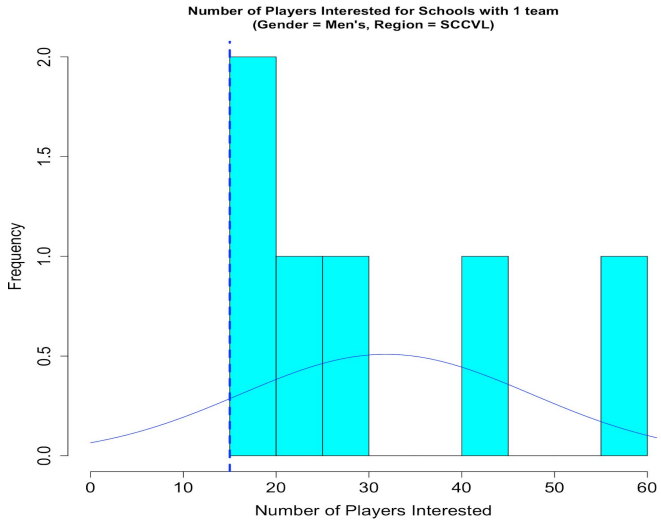
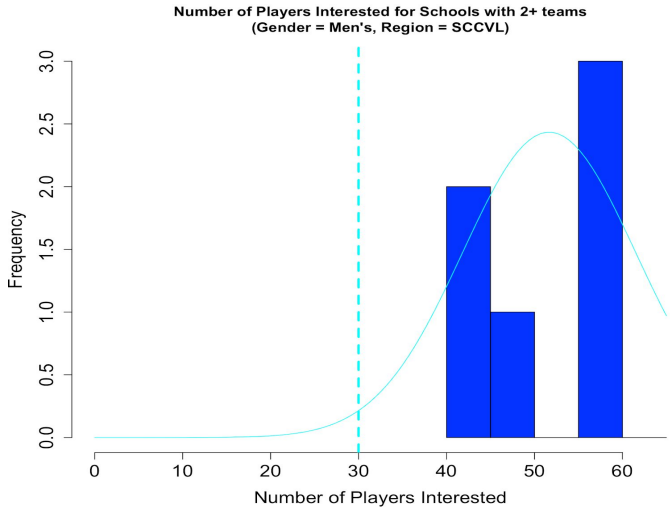
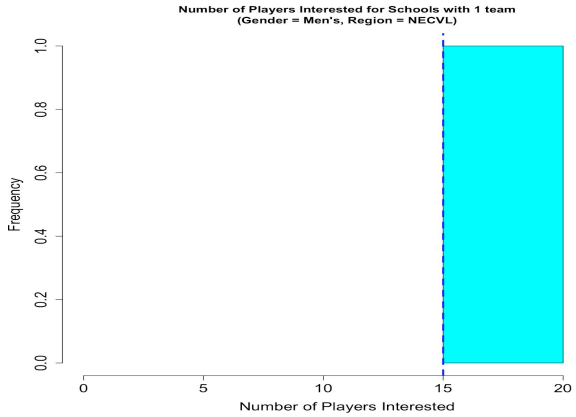
(Region = SCCVL)
1 team (Graph 7)



2+ teams (Graph 8)

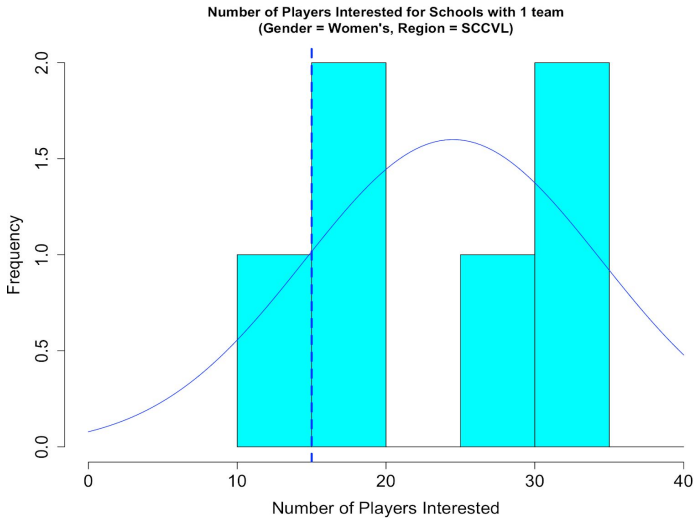


(Region = NECVL)
1 team (Graph 9)

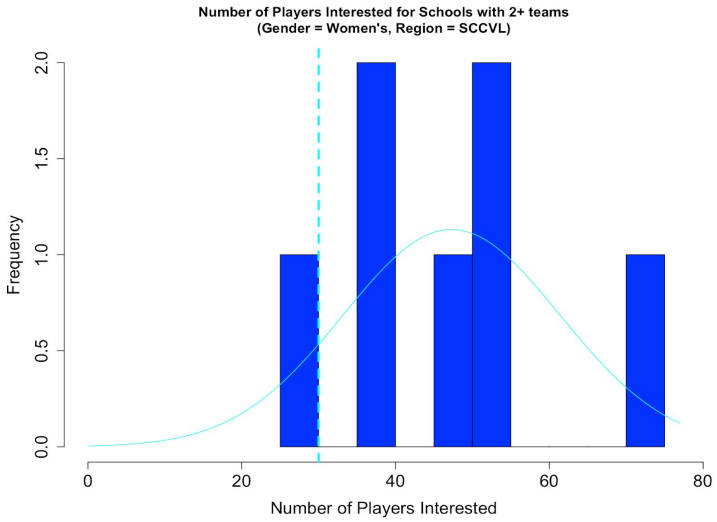


Histogram for Women's Section

(Region = SCCVL)
1 team (Graph 10)



2+ teams (Graph 11)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Chapter 2: Varsity Player Demographics

Summary

The following information summarizes the amount of Varsity players, their background in Varsity volleyball, and the proportion of Varsity players who make their club's team. In the survey given, schools were asked how many Varsity players tried out for their program, how many of these players are returning club members, and how many of those players played in community college only.

While there were no significant patterns from the returning players category, data could be gathered and analyzed for the other two categories. The proportion of community college players (such as CCCAA and NJCAA) to university-based Varsity athletes (such as NCAA players) was nearly even for the men's programs, while the women's programs had an estimated 2:1 ratio.

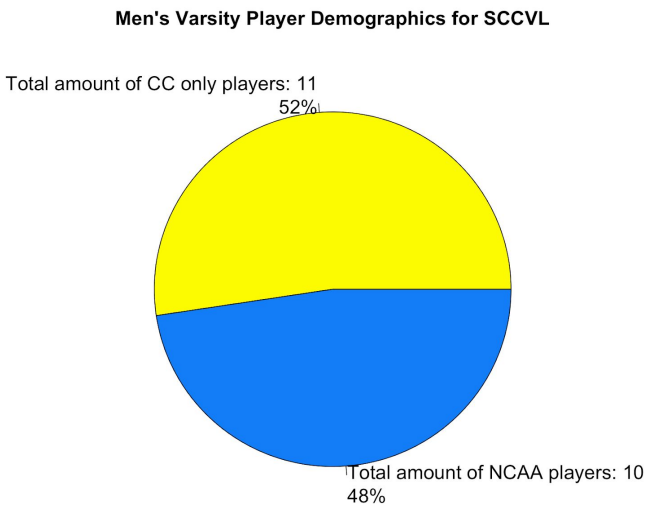
Most schools had enough Varsity spots for the players. Out of all the schools polled, two men's programs and four women's programs did not have enough spots for all of their Varsity players trying out. The following graphs visualize said data.

The first graph depicts the ratio of community college to university players via a pie graph. The second graph depicts the aforementioned categories for each program along with the maximum number of Varsity spots allocated for that school's program through a bar chart. The graph are sectioned by gender and region. Since the SCCVL was the only region with Varsity players, only the SCCVL's men and women are depicted.

Ratio of Community College Players (Yellow) to University (NCAA) Players (Blue)

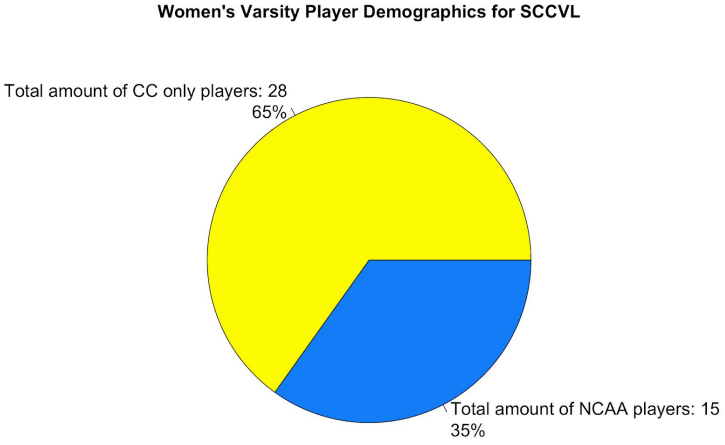
Men's Section

(Region = SCCVL) (Graph 12)



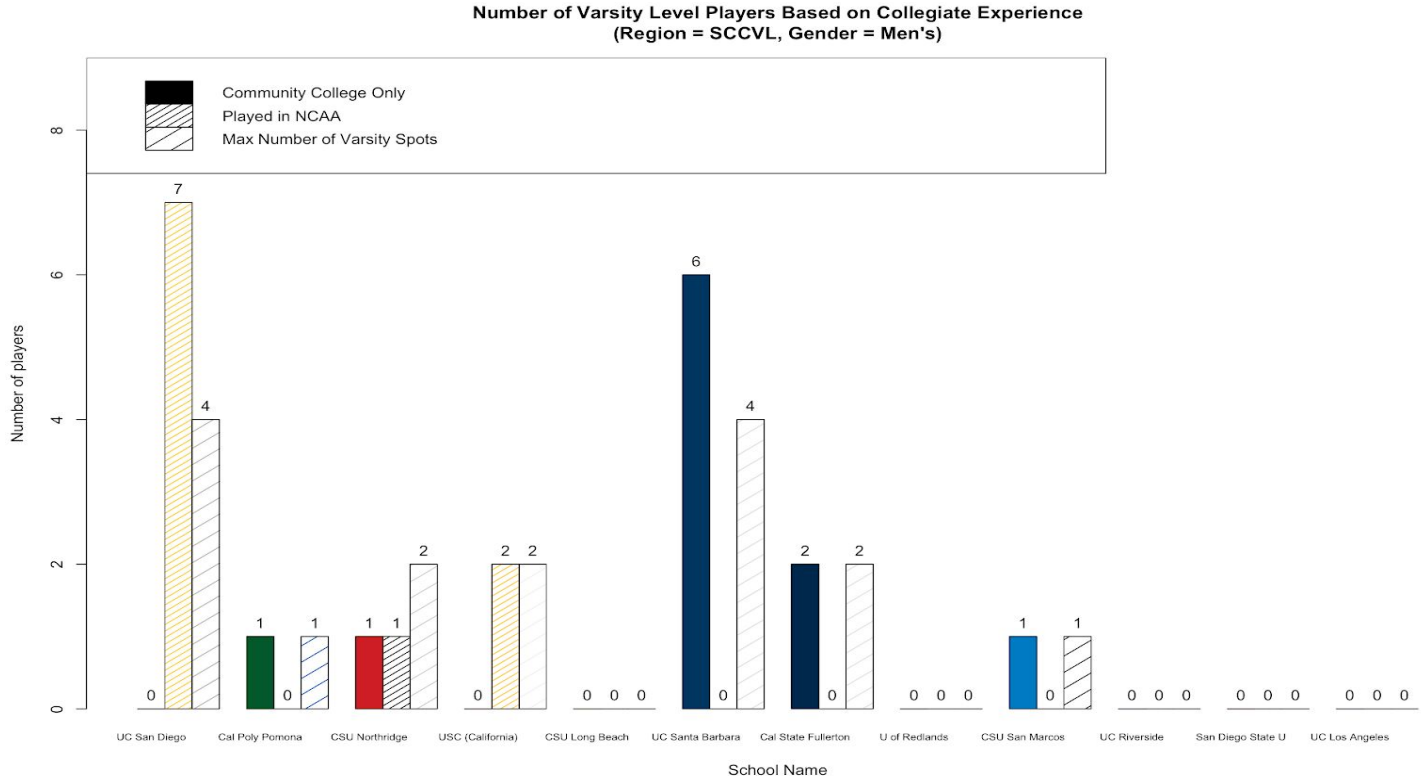
Women's Section

(Region = SCCVL) (Graph 13)

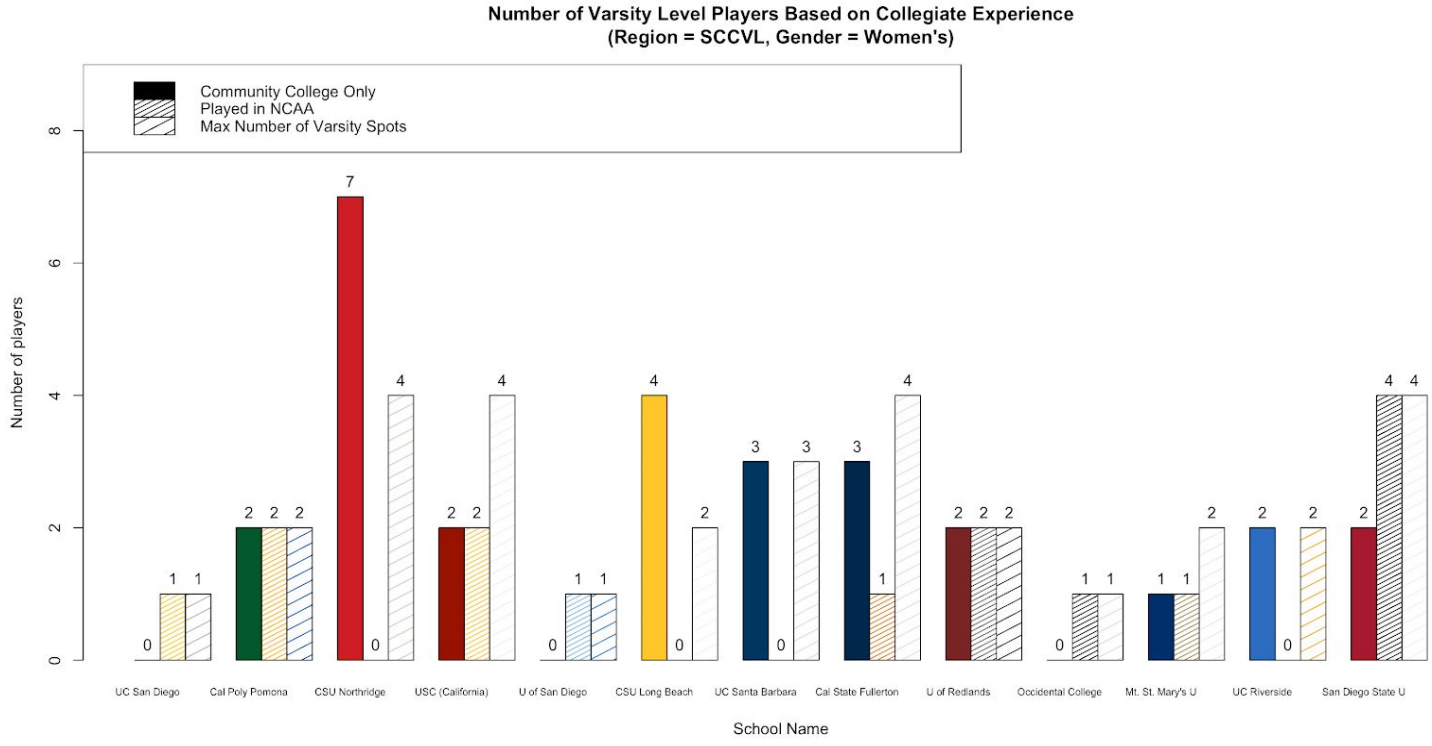


School Demographics for Varsity Players Compared to Maximum Number of Varsity Spots Allocated

(Graph 14)



(Graph 15)



Chapter 3: Interest in Adding a Varsity / Open Level Division

Introduction

Club programs were surveyed to see if they would be interested in adding an Open division (with no cap on Varsity players per team) to their respective leagues.

If a program answered "Yes" to this question, they were given a follow-up question, which asked, "For your program's gender, how many teams would your program represent in this league?". This question was asked to see if regional club volleyball leagues should add an Open division to show interest for said division at the national level and the NCVF Championship. While not all programs were surveyed for this question, schools who answered "No" to the previous question were assumed to represent 0 teams in the Open division, in order to calculate an average representation amongst all programs per region. My hypothesis is if an average of 1 team would be represented per school (and at least 8 schools within the region), there is evidence to show significant interest in adding an Open division to that region's league.

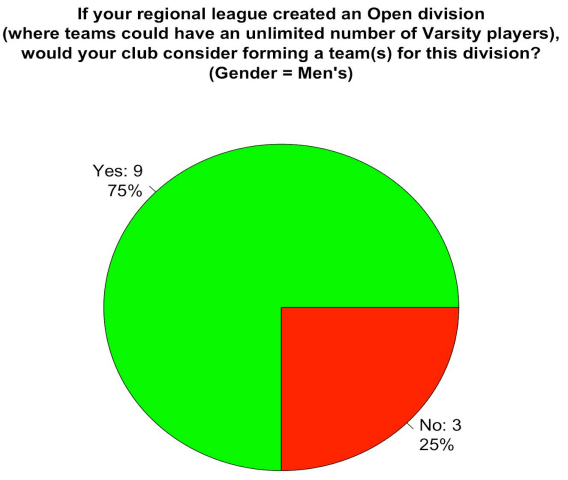
If a program answered "No", they were given a different follow question, which asked, "Why would your program not be interested in creating an Open division?". This was done to figure out common reasons for why programs would be against or unable to support an Open division. Unlike the subquestion for the "Yes" answer, only programs who answered "No" were analyzed for this question.

Would Your Program Be Interested In Adding an Open Division to Your League?

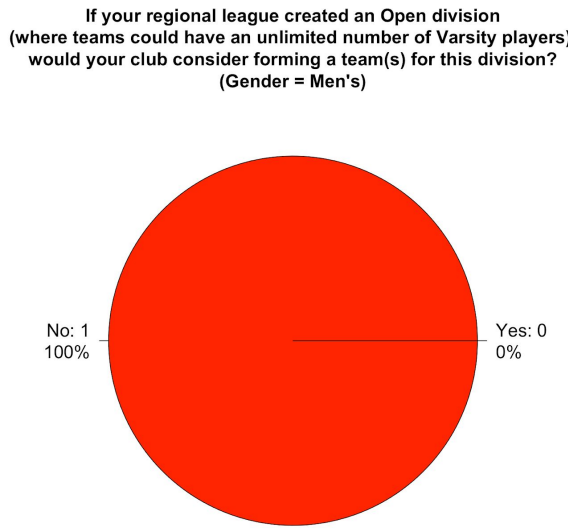
For this question, programs were categorized by region and gender. The question states: "If your regional league created an Open Division where teams could have an unlimited amount of Varsity players, would [your program] consider forming a team(s) for either gender?". Since some people surveyed represented only one gender of their program, the question was left ambiguous at the end, so these people would not have to assume information for their counterpart gender. In the following section, pie graphs represent the proportion of "Yes" to "No" answers for this question. Each graph is categorized by gender and region.

Men's Section

(Region = SCCVL) (Graph 16)



(Region = NECVL) (Graph 17)



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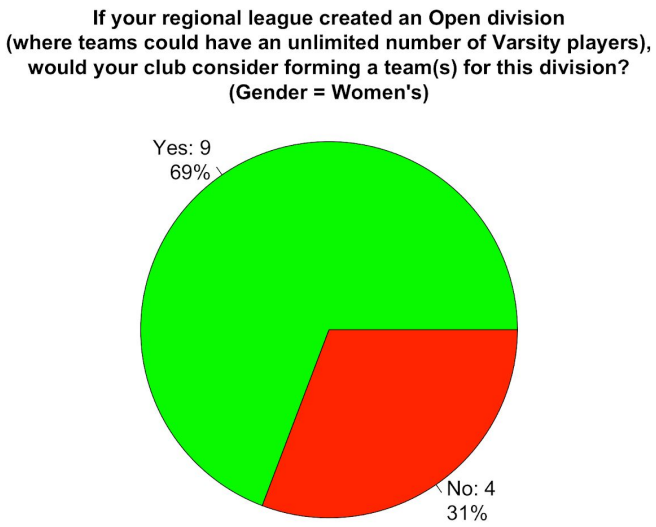
Women's Section

(Region = SCCVL) (Graph 18)



Section 3A: Number of Teams Each School Would Represent in an Open Division

For all the programs that answered "Yes" to the previous question, they were also asked: "how many [men's / women's] teams would represent your club?" The programs who did not answer "Yes" were assumed to represent 0 teams for this section in order to produce the most accurate average for the sample size of programs. Since the NECVL only has one team that partook in this survey, they will not be given a histogram in this report.

The following responses have been formatted into a histogram with a normal curve displaying where the average number of teams lies approximately in comparison. Teams have been split by gender and region again for this graph in order to determine which specific genders and regions are in greatest demand of an Open division. If a region's average is at least 1 based on a 95% confidence interval, then there is enough evidence to show significant interest in an Open division league for that region's gender.
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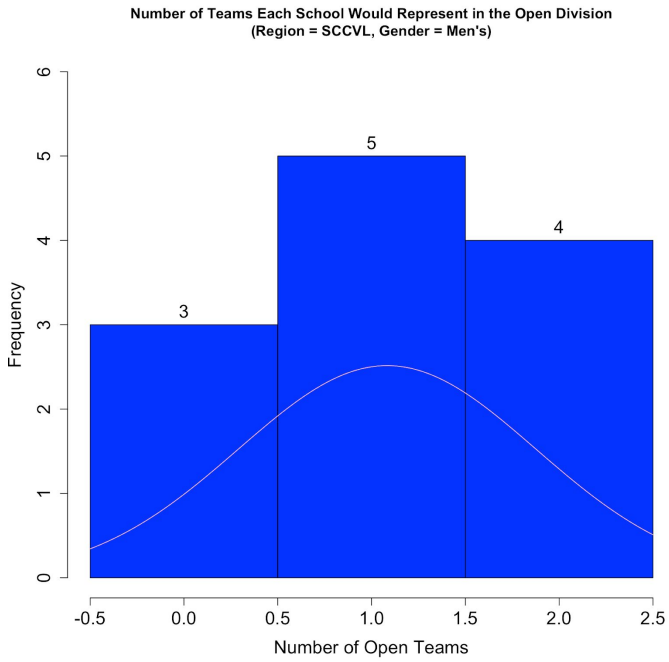
Men's Histogram: Number of Open Division Teams

(Region = SCCVL) (Graph 19)

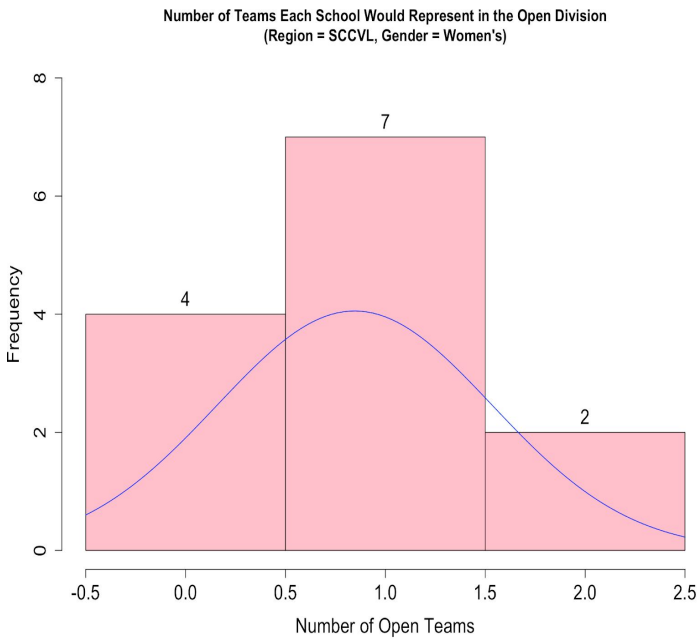


Average (Expected Value) = 1.08 teams

The total number of teams surveyed from the SCCVL Men's division is 12, so there are at least 8 teams, making this division eligible for the hypothesis. Based on a 95% confidence interval, there is not enough evidence to disprove the average number of teams being less than 1. Also, since the expected value is 1.08, there is significant evidence to show interest in Open division league for the SCCVL Men, because the expected value is greater than 1. In theory, if the average (shown above) is multiplied by the number of teams surveyed, approximately 13 teams would participate in an Open division if it were created.

Women's Histogram: Number of Open Division Teams

(Region = SCCVL) (Graph 20)



Average (Expected Value) = 0.85 teams

The total number of teams surveyed from the SCCVL Women's division is 13, so the minimum of 8 teams to qualify for the hypothesis is cleared. Based on a 95% confidence interval, there is not enough evidence to disprove the average number of teams being less than 1. Solely based on the hypothesis and range for the confidence interval, there is enough interest to create an Open division for the SCCVL Women although the expected value is less than 1. In theory based on the average shown average and total number of teams surveyed, approximately 11 teams would participate in an Open division if it were created.

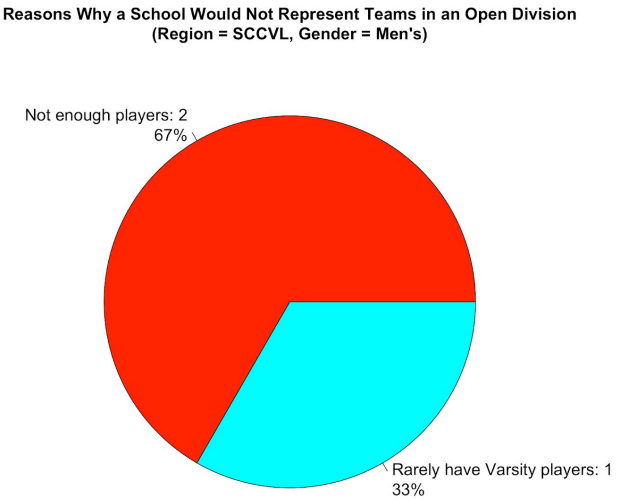
Section 3B: Reasons Why Teams Would Not Desire an Open Division

For every team that answered "No" to creating Open division teams, a follow up question asked: "what would be your club's reason [for not forming a team]?". Each region and gender is split to see trends amongst each category. Answers were condensed into brief phrases to make it easier for common reasons to be counted together. For this section, a pie graph is formulated to display the reasons for why a program would not participate in an Open division.

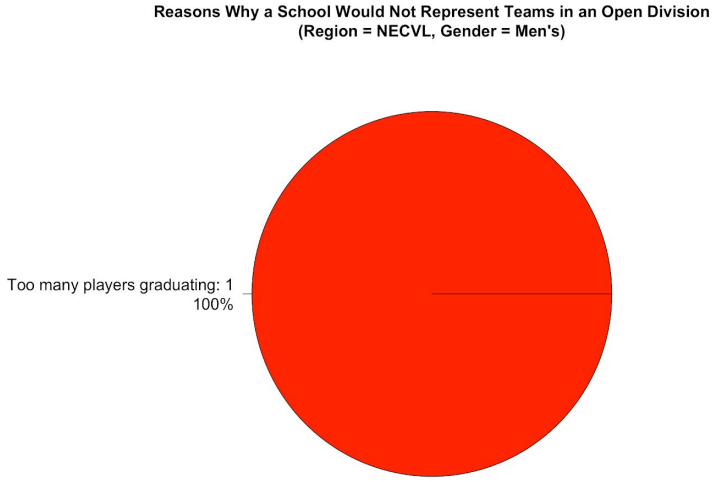
For the NECVL section, the reason given is due to the school being a community college, where most, if not, all players either graduate and/or transfer to a four-year institution typically after two years.

Men's Section Pie Graphs

(Region = SCCVL) (Graph 21)



(Region = NECVL) (Graph 22)



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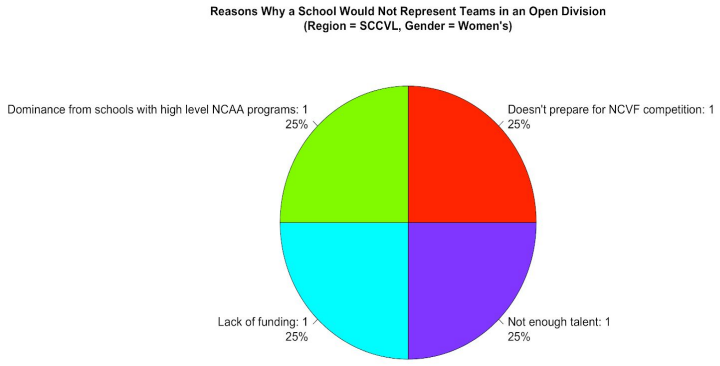
Women's Section Pie Graph

(Region = SCCVL) (Graph 23)



Reasons for SCCVL Women:

- Dominance from schools with high level NCAA programs: 1 (25%)
- Doesn't prepare for NCVF competition: 1 (25%)
- Lack of funding: 1 (25%)
- Not enough talent: 1 (25%)
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Chapter 4: School Opinions on the Varsity Rule and Its Impact on Community College Players

Introduction

The final question of the survey asked for the opinions of club programs regarding the Varsity rule, specifically to how it applies to community college athletes.

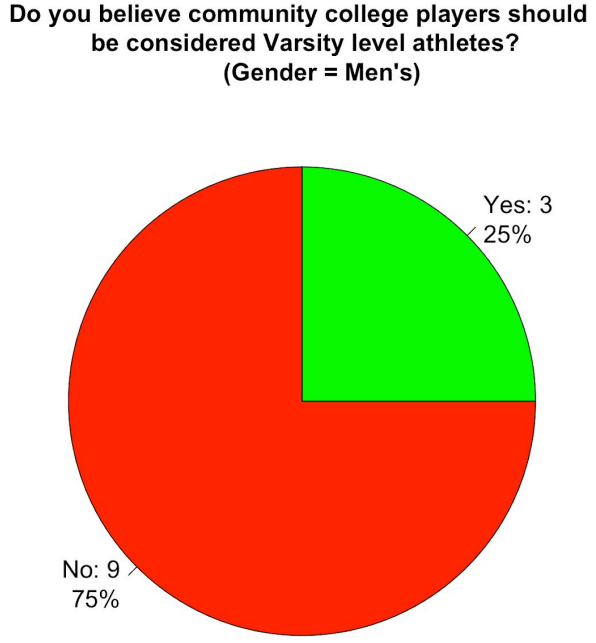
As of the 2019-2020 season, the NCVF classifies Varsity players as players who have previously played at the intercollegiate level. Intercollegiate levels include university leagues, such as the NCAA and NAIA, and community college leagues, such as the CCCAA and NJCAA. Club teams can have a maximum of 2 Varsity players per team. The rule is intended to prevent club programs from stacking teams with former intercollegiate athletes, favoring said athletes over players without intercollegiate experience, and giving programs with the most intercollegiate athletes an unfair advantage.

Most community colleges do not offer organized competition for men's volleyball. Southern California is unique however, because it is the home to the CCCAA, the only community college league to have a Varsity men's volleyball league. Some players play in this league as a gateway to a university team, while others play in this league as an alternative to a university team. Male athletes who attend a community college outside of the CCCAA do not have Varsity level volleyball. Community colleges such as Rhode Island CC offer club level teams for their male athletes, allowing them to play against other schools without being deemed Varsity level.

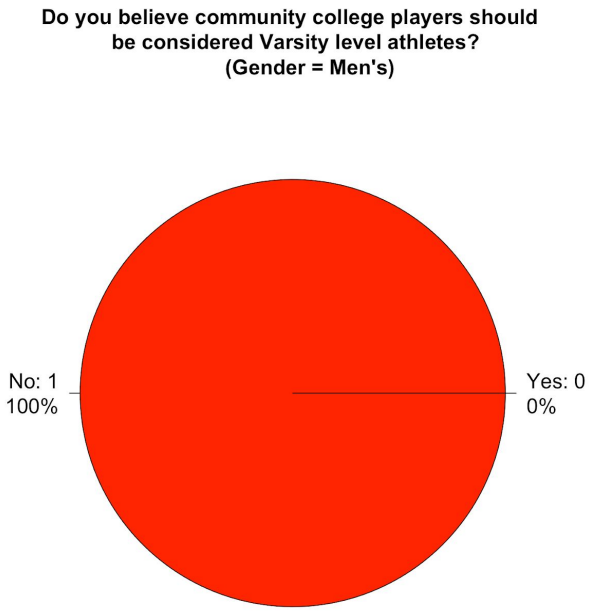
Part one of the final question asks club programs: "Should community college players be considered Varsity level players if they never played on an NCAA [or NAIA] team?". The question excludes community college players who also played at the university level (i.e. NCAA, NAIA) to evaluate opinions solely of the community collegiate level of play and its players. Survey participants are given two options ("Yes"/"No") to select from, along with a follow-up question, asking to explain their previous answer's reasoning. Both parts of the final question are depicted via pie graphs.

Pie Graphs for Part One: Men's Section

(Region = SCCVL) (Graph 24)



(Region = NECVL) (Graph 25)



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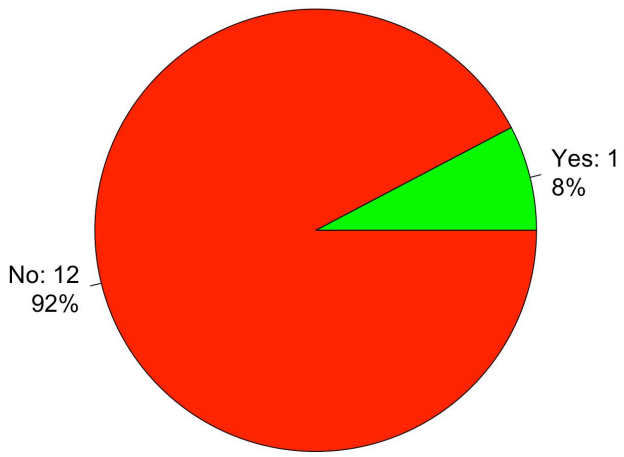
Pie Graph for Part One: Women's Section

(Region = SCCVL) (Graph 26)



Section 4A: Why Community College Players Should Be Considered Varsity Level Athletes

The following pie graphs explain why programs believe community college competition should remain Varsity level, upholding the current NCVF rule. Since no one from the NECVL answered "Yes" to the previous question, only two graphs are presented below.

The most common reason amongst all genders is "collegiate level experience" with 2 votes, followed by "CC players plan to play at a higher level" and "CC level play is higher than club" with 1 vote each. The main argument for upholding the NCVF rule is that organized community college volleyball is a higher level of play than that of collegiate club volleyball. Community collegiate athletes have coaches, scheduled gym time and weight room, and opposing schools to play against, all funded by their respective college. Cal Poly Pomona states that these athletes have, "collegiate level experience", making them more skilled than their club level counterpart.

In addition, club programs must raise their own funds in order to participate every year. Community college teams, however, get a budget every year from their school, which they can choose to increase through fundraising. They have a better advantage at hiring coaches with high pay, purchasing great quality equipment, and traveling to more events than a club team would be able to do. Community college is like any other intercollegiate league, because it has better opportunity to develop its players than club programs do.
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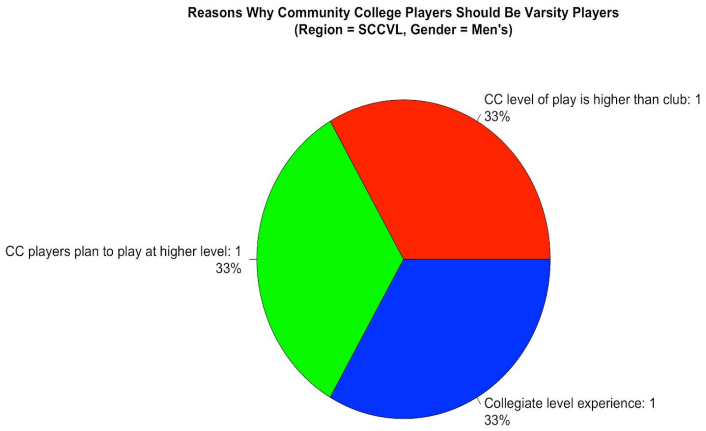
Pie Graph for "Yes": Men's Section

(Region = SCCVL) (Graph 27)



Reasons (counterclockwise):

- CC players plan to play at a higher level: 1 (33%)
- CC level of play is higher than club: 1 (33%)
- Collegiate level experience: 1 (33%)

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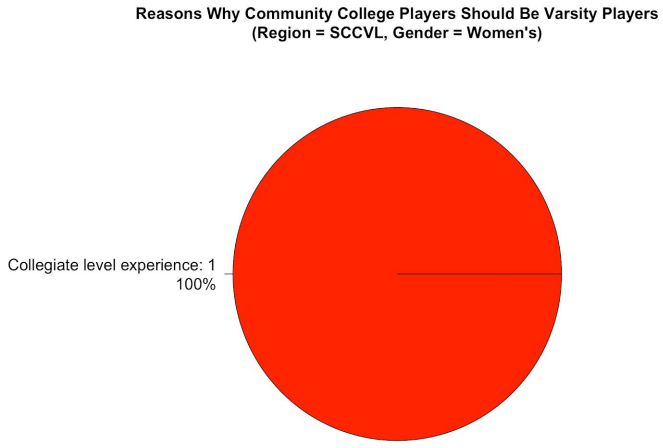
Pie Graph for "Yes": Women's Section

(Region = SCCVL) (Graph 28)



Section 4B: Why Community College Players Should Not Be Considered Varsity Level Athletes

The following pie graphs show reasons why the current NCVF Varsity rule should be modified to exclude community college players.

The most common reason amongst all three regions and genders is "lower level of competition" with 7 votes. A few other common reasons for excluding community college players from the Varsity level rule include: "lower skill level [than university athletes]" and "lower level of training [than university programs]".

While community college programs do have school backing, the amount of backing is far less than that of a university. Community college players do not have the same level of training as a university program, because community colleges have far less funding than their university counterparts. Many of these community college athletes are players that were not accepted by university programs due to their lower skill level.

Even after training with a community college program, not all players are skilled enough to compete in university competition. According to an excerpt from Cal State Fullerton, "Just because you played at a [community college] does not mean you are to the same standard as a [division] 1-3 player". The level of skill in community college heavily varies depending on the school's investment into the program along with fundraising. Some schools have little to no fundraising, putting
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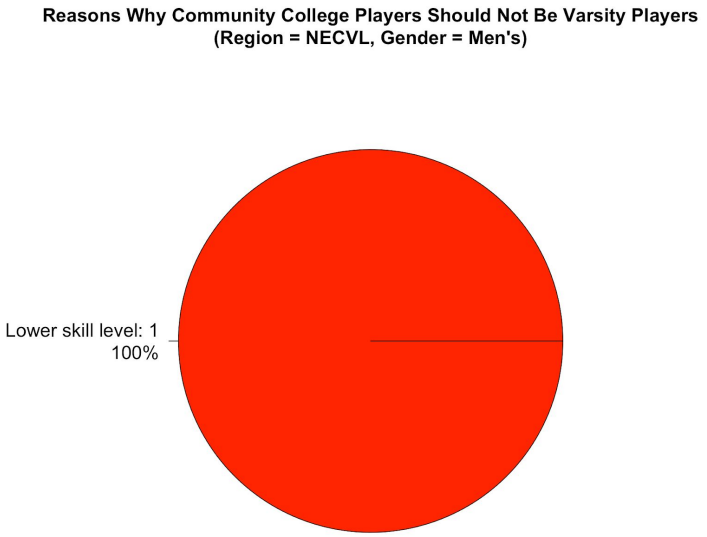
them at a much lower level than their highly funded counterparts who have greater overall success. There is far less of a guarantee for community college players to be at a higher level than club players compared to university players. According to a loose vocal excerpt from the UCSB men's club volleyball president, "Players should not be punished for being unable to afford university off the bat." If a player must attend community college in order to afford tuition to a four-year college, they should not be punished for playing volleyball at a transitional two-year institution.

(Region = NECVL) (Graph 30)



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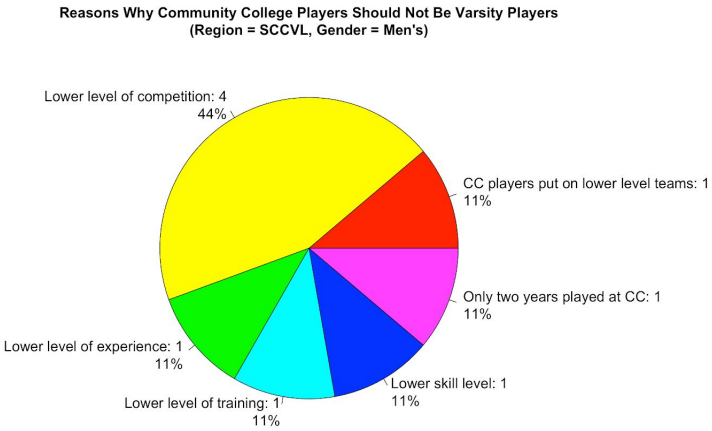
Pie Graphs for "No": Men's Section

(Region = SCCVL) (Graph 29)

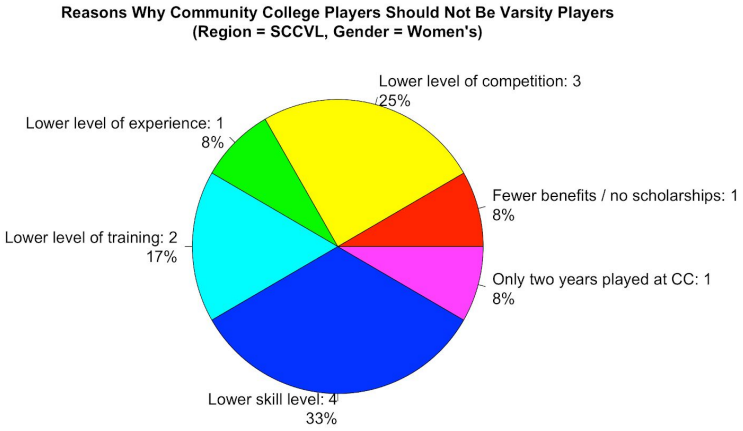


Reasons (counterclockwise):

- CC players put on lower level teams: 1 (11%)
- Lower level of competition: 4 (44%)
- Lower level of experience: 1 (11%)
- Lower level of training: 1 (11%)
- Lower skill level: 1 (11%)
- Only two years played at CC: 1 (11%)

Pie Graph for "No": Women's Section

(Region = SCCVL) (Graph 31)



Reasons (counterclockwise):

- Fewer benefits / no scholarships: 1 (8%)
- Lower level of competition: 3 (25%)
- Lower level of experience: 1 (8%)
- Lower level of training: 2 (17%)
- Lower skill level: 4 (33%)
- Only two years played at CC: 1 (8%)
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Epilogue: Data Used for This Project and Where It Can Be Found

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All data for this project can be found on the GitHub page for Jake Simon (jakesimon2). The following documents will be included on the page, jakesimon2/NCVF-Varsity-Analytics :

- Club Volleyball Varsity Interest 2020.xlsx
    - Contains answers to all the survey questions and separated by gender, along with a response from the MIVA Organizer
    - Contains full-length reasons for the answers given to the second part of Chapter 4
    - Contains conference data from the NCVF as of November 18th, 2019
- Math Work for NCVF Varsity Project 2020.xlsx
    - Calculations for the hypotheses made in Chapters 1 and 3
- NCVF Varsity Analytics.R
    - R code used to graph and chart data from “Club Volleyball Varsity Interest 2020.xlsx”
- NECVL Men’s Varsity Make Stats.csv
    - Charts player data from Chapter 1
- SCCVL Men’s Opinion Data.csv
    - Charts answers from Chapter 3 and part one of Chapter 4
- SCCVL Men’s Varsity Make Stats.csv
    - Charts player data from Chapters 1 and 2
- SCCVL Women’s Opinion Data.csv
    - Charts answers from Chapter 3 and part one of Chapter 4
- SCCVL Women’s Varsity Make Stats.csv
    - Charts player data from Chapters 1 and 2
- 2020 NCVF Varsity Interest Survey Report.pdf
    - This document as a pdf file for anyone to download and read via GitHub

This is the link, which connects to the NCVF Varsity Analytics page on GitHub: https://github.com/jakesimon2/NCVF-Varsity-Analytics