Women's Underperformance in Chess:

The Armenian Female Champions

by Ani Harutyunyan

Presented to the Department of English & Communications

in Partial Fulfillment of the

Requirements for the Degree of Bachelor of Arts

American University of Armenia

Yerevan, Armenia

May 22, 2019

Table of Contents

Abstract

Women have historically been underrepresented and less successful in chess as compared to

men. Despite a few female players who have managed to qualify for the highest-rated chess

tournaments and perform on an equal level with men, the chess world continues to be male-

dominated. From time to time, different female players make achievements among men, but they

fail to show consistent results. This project focuses on Armenia, which, despite its small

population size, nearly three million people (Worldometers, 2019), ranks the seventh in the

world by the average rating of its all-time top 10 players (Federations Ranking, n.d.-a) and the

18th by the rating of female players (Federations Ranking, n.d.-b). It represents the stories and

concerns of the strongest Armenian female players of different age groups and aims to

understand the reasons for their relatively less success in chess.

Introduction

In 1991, the world witnessed a young Hungarian girl breaking a record that had stood for 33 years. At the age of 15 years and four months, Judit Polgar became the youngest ever chess grandmaster breaking the record previously held by Bobby Fischer, arguably the greatest genius of chess (Friedel, 2006). This was the first time when the belief of an 'inherent male advantage' in chess was seriously questioned. As Polgar started to defeat the top players and world champions one by one, everyone recognized her to be one of the strongest players of her generation. It has now been four years since her retirement, and with the next big hope of women chess, China's Hou Yifan, deciding to quit chess to get a Ph.D. at Oxford University, a question arises. "Who is going to challenge the male dominance in chess now?"

It seems that in a "purely" intellectual activity like chess, women should have stood equal to men; however, they are not even close to. Out of the 16 world champions, no one was a woman. Moreover, women are far behind men by their ratings. There are 282 players between reigning World Champion Magnus Carlsen and reigning Women's World Champion Ju Wenjun as of May 1, 2019, World Chess Federation's (FIDE) rating list. FIDE calculates the ratings based on a player's performance against other players to indicate their relative skill level of chess. The difference in the ratings between players serves as a predictor of the outcome of their games. According to FIDE's table of rating conversion, a player whose rating is 300 points greater than their opponent's is considered to have around 85% probability of winning the match (*FIDE rating regulations effective from 1 July 2017*, sect. 8.1b). Notably, the rating difference between the two world champions is almost 300 points.

Hence, Norway's Magnus Carlsen has a rating of 2861 as of May 2019 (World Chess Federation, n.d.-b). Given that FIDE renews its rating lists every month, Norway's prodigy has

not yielded the first place since July 2013. The reigning Women's World Champion, Ju Wenjun, has 2590 rating points as of May 2019, which ranks her to No. 283 among world's active players. Her peak was in March 2017 when her rating reached 2604, but it did not get her to the top 100 list (World Chess Federation, n.d.-a). Because of her low rating, Ju does not even qualify for events where the world's top players participate. One of her latest tournament, a short description of which will perfectly illustrate the relative insignificance of her rating, was in March 2019 in Prague, Czech Republic. The Prague Chess Festival consisted of two tournaments, masters (Chess-Results, 2019-a) and challengers (Chess-Results, 2019-b). The masters' tournament was quite strong, but it did not feature any of the world's elite players, those who are consistently in the top 10 places by their rating. The top seed of the tournament was David Navara, No. 18 in the world at that point. The challengers' tournament, on the other hand, had World's No. 74 as the highest seed. Where did the women's world champion participate, you may ask. She was the sixth seed in the challengers' tournament and finished third with six and a half points. Such a result in the challengers' tournament was considered good for the women's world champion, while Magnus Carlsen would not contemplate an invitation even to the masters' tournament.

Importantly, Ju Wenjun, despite being a world champion among women for the last two years, is not considered the strongest female chess player. Her compatriot Hou Yifan is widely regarded to be "leaps and bounds" ahead of her female competitors. She had been a three-time women's world champion before declining to participate in most women-only events because of her obvious superiority. Hou was invited to take part in many top events, including the 2017 world championship cycle, where she was the only female player. She has done reasonably well against Carlsen and other elite players of the world. However, the 24-year-old Chinese basically

quit chess in 2018 after receiving a scholarship for her Ph.D. studies at Oxford University ("4 Chinese students," 2017). She still does accept some invitations into chess tournaments. However, she has admitted being unable to combine her studies with chess.

Nevertheless, despite some examples of female chess players, such as Judit Polgar and Hou Yifan, who played on the same level as men, the difference in strength between the two genders remains immense. FIDE and chess sponsors organize separate tournaments for female players to give them a chance to make a living by chess. These tournaments are considered an endorsement for women's chess, as they offer female players monetary prizes that they would hardly win in open events played alongside with men. The separate tournaments are expected or hoped to result in more females choosing a career in chess and maybe, someday, catching up with men by their rating and success.

Maybe that day will arrive. It was in the year of 1927 when FIDE established the Women's World Chess Championship (men's first World Championship was played in 1886). Since then, there has been tremendous progress with more women qualifying for the highest chess title of Grandmaster and increasing their ratings. As 13th World Chess Champion Garry Kasparov (2017) explored in his interview with *The Telegraph*, the average level of women players has improved significantly. He noted that a woman player reaching the top 10 of FIDE's rating list is formidable and, theoretically, it has become possible for a woman to win a world championship. However, judging from the results over the past 25 years, it will take time before the gap between men and women chess players is closed. Kasparov also suggested that the pace is slow and to accelerate it the world may need another Judit Polgar, who was "quite a unique talent, and even then an improved version" (para. 32).

Even if women take up more space in the chess world, they need individuals who will lead and inspire them by their success. Hungary has the Polgar sisters, two of whom qualified for men's world championships, and China has Hou Yifan. The list of the most successful female players in history consists of names representing the same countries over and over again. Russia, Georgia, Ukraine, Hungary, and China gave birth to the brightest female chess players. In fact, except for Bulgaria's Antoaneta Stefanova, no other country has had a women's world champion. The same countries have historically shown outstanding results in men's chess too. However, not all countries that have been successful in men's chess possess the same level of development in women's chess. One such example is Armenia, a country that won three Chess Olympiads (2006, 2008, 2012), the most prestigious team championship in the chess world, and had many of its young players achieve the highest prizes in European and World Youth Chess Championships. Ninth World Champion Tigran Petrosian was Armenian, 13th World Champion Garry Kasparov was born in a family of an Armenian mother and Jewish father, and one of the world's strongest grandmasters, Levon Aronian, is Armenian too.

When it comes to Armenian female chess players, the number of achievements decreases dramatically. A country with such a great chess culture has seen only one female grandmaster in its history, Elina Danielian, who currently represents the women's national team on the top board. The fact that Armenia's strongest female player ranks No. 53 among active female players worldwide (World Chess Federation, n.d.-c) says much about the state of women's chess in the country. Except for Danielian and second-board Lilit Mkrtchian, who has a title of International Master (IM), no other active female players in Armenia have qualified for "men's" titles. Instead, eight of them hold women titles: six Woman International Masters (WIM), one Woman FIDE Master, who, despite the lower title, is Armenia's third-highest-rated female player, and one

Woman Candidate Master (WCM), the lowest of chess titles (Armenian Chess Federation, 2019). This gap between Armenian male and female players is undoubtedly affected by the difference between male and female chess players worldwide; however, Armenia-specific issues also have a considerable impact on it. The reasons for such a gender gap range from psychological and physiological issues to simple differences between the numbers of men and women players.

This project examines the differences between male and female chess players and the causes of male dominance in the field. It explores the Armenia-specific issues in the global context of women's chess through Armenian female champions' stories and perceptions about their opportunities in the chess world.

Literature Review

The research shows that a considerable number of causes for female chess players' poorer performance arise at a younger age and they mostly relate to psychological issues which result in girls' self-underestimation and later departure from chess. One relevant concept is social identity theory (Tajfel and Turner, 1979), which suggests that the groups to which people belong are significant for their pride and self-esteem. The groups can be of different types: social class, age, racial, sex, political, etc. When the stereotypes put on a group are positive, its members try to conform to them to increase their self-esteem. On the other hand, if an individual belongs to a group whose identity is negatively valued in a particular domain, they become vulnerable to social identity and stereotype threats, which can, in turn, negatively affect their performance in the field (Inzlicht & Schmader, 2012).

The term stereotype threat (Steele & Aronson, 1995), which is often used for analyzing such stereotype-related situations, "is defined as a situational predicament in which individuals are at risk, by dint of their actions or behaviors, of confirming negative stereotypes about their group. It is the resulting sense that one might be judged in terms of a negative stereotype that is "in the air" (Steele as quoted by Inzlicht & Schmader, 2011, p.9). This theory has long been applied in the educational field to analyze the causes of relatively poor performance among different social, racial, and gender groups. The research of over 15 years has shown that stereotype threat negatively affects performance among African Americans, Latinos, women, and even the elderly. For example, it results in a lower success among the elderly in memory, women in math, and even among whites in athletics (Inzlicht & Schmader, 2011, p.6).

Rothgerber and Wolsiefer (2014) apply the stereotype threat theory to chess and examine its effects on young female chess players in a naturalistic environment. They use data from 12

scholastic chess tournaments in the USA to show that the performance of female participants

significantly worsened when they faced a male opponent. In particular, the participants of the

survey achieved only 83% of the expected success for a player of their rating. Stereotype threat

susceptibility was especially pronounced when female players faced a strong opponent or

someone in a higher grade. Furthermore, age turned out to be an essential factor. The younger

the female participant was, the more she was affected by the stereotype threat. Significantly, the

same issues were not found among male participants of the tournaments, which suggests that the

issues were not universal to young chess players but rather were conditioned by the presence of

stereotype threat. The study also shows that those female players who were most vulnerable to

stereotype threat were more likely to quit chess. This finding can be one reasonable explanation

for the sharp difference between the numbers of male and female chess players.

The difference in numbers, in fact, is itself an important factor in determining the reasons

for less success in chess among women as compared to men. According to the FIDE rating list of

May 2019, only about 10% of all FIDE-rated players are females. Bilalic, Smallbone, McLeod,

and Gobet (2009) focus their research on Germany, where they examine data from 3000 chess

tournaments recorded by the German Chess Federation per year. The analytic method they apply

estimates "the expected difference between the top male and female performers based on the

overall male and female participation rates using the parameters of central tendency (mean) and

variability (s.d.) of the underlying population" (p. 1162). The overall findings suggest that

women's performance was consistent with the expectations given to them based on their number.

Hence, the researchers conclude that fewer achievements among female chess players are a result

of fewer female chess players. They make an important point that there is insufficient evidence

for arguing that men are innately stronger in chess than women. According to the authors, such

biological and cultural explanations for male dominance in the field do not take into

consideration the vast disparity in the number of male and female tournament participants, which

statistically affects the probable gender of the best chess players.

The participation rates factor is also overlooked by many chess players. In a 2007 small

survey conducted by chess portal *ChessBase*, some of the top female players were asked to

explain male dominance in chess. None of them mentioned the differing participation rates.

Instead, they offered explanations such as higher level of emotionality among women, which

makes them fail when it comes to nerves or physical weakness, which prevents them from

staying concentrated throughout the whole game (Ahmadov, 2007). At the same time, one of the

interviewed male grandmasters said that endgames are the weakest spot of female players.

Women may lack the endgame technique or get exhausted by the end of the game.

Furthermore, Stafford (2018) analyzes the data from over 5.5 million chess games of

international tournaments to see if women perform poorer when they play against male

opponents versus when they play against female opponents. The results show that when playing

against men, women outperform the expectations that would be given to an average male player

of their rating against the same opponent by 1%. Stafford goes on to argue that the so-called

"stereotype threat" phenomenon is not valid for female chess players since they play better

against male than against female opponents. One recent example is Alina Kashlinkaya's

performance in the highest-rated open tournament of the 2018 year, Isle of Men International

(Chess-Results, 2018-a). She shared 10th place with some of the strongest grandmasters in the

world. She was ahead of Grandmasters Levon Aronian and Wesley So, both of whom are

considered elite players. Despite such success, Kashlinskaya performed poorly in the Women's

World Championship 2018 and got eliminated in the early stages (Chess-Results, 2018-b). The

author suggests that even if stereotype threat affects female players, it may work paradoxically by raising female's expected performance. Factors like older age, higher playing standard, or even the greater pressure of international competition may also contribute to the paradox. However, the different results for mixed pairs compared to single-sex pairs may also be explained by male under-performance rather than female over-performance. "This could be due to male underestimation of female opponents, misplaced chivalry, or 'choking' due to the ego-threat of being beaten by a woman" (Baumeister, as cited in Stafford, 2018, p.9). The author, however, accepts that the factor of different participation rates suggested by Bilalic et al. (2009) can be of greatest importance. The sample he used for his analysis consists of "5, 558, 110 games, from 150, 977 male players and 16, 158 female players," where the number of females is only a little higher than 10% of that of male players (p. 4). Considering that the author focused merely on international chess tournaments attended by players who were active during the previous 92 months and whose average age was 31.5 at the point, most of beginner female players, who are most vulnerable to stereotype threat, were left out.

In her article Where's Bobbi Fischer?, Schank (2015) concentrates on the younger group of female chess players and the issues they face at the beginning of their possible career. As a chess mom, she presents a range of issues that affect the number of females in chess and their performance. One is the lack of female coaches. Schank claims that parents of girls often do not have much confidence in male coaches and, therefore, refuse to let their daughters leave the city or country under their supervision, which, in turn, deprives girls of some valuable experience in international tournaments. Another important issue is the boys' tendency to get vocally aggressive by middle school age. At this age, boys start to tease and provoke their opponents during the training games or after them, and girls do not like this. Some of them, according to

Schank, decide to leave the clubs and quit chess. At last, girls and women, in general, lack faith

in their intellectual ability. The presence of such faith, according to Schank, is an essential step

"toward overcoming the soul-rattling feeling of being the only girl in the room, whether it's at a

chess tournament, or in a computer science class" (para. 34).

It is not only women who lack faith in females' intellectual abilities. Using the field-

specific ability beliefs (FAB) hypothesis, Meyer, Cimpian, and Leslie (2015) demonstrate that

women are usually underrepresented in fields that are believed to require brilliance or intellectual

talent. They focus on a wide range of intellectual fields, such as science, technology,

engineering, and mathematics to show that laypeople and the field practitioners including women

support the idea that these fields require brilliance and an inherent ability for success. Since

women are often stereotyped to lack the same sort of innate intelligence as men, they are

discouraged from participating in these fields. The researchers also argue that if the practitioners

of these fields chose to highlight "the role of sustained, long-term effort in achievement," the

gender gap in the intellectual fields may have correspondingly been reduced (p. 11).

Some researchers, in turn, suggest that it is the knowledge about the high involvement of

girls and women in an intellectual domain that boosts female's faith in their success. For

example, the study conducted by Tellhed and Jansson (2018) examined the long-term reactions

of Swedish students on two pieces of experimentally manipulated information: either academia's

current dominance of men or of its improving gender-balance. Women who were reminded about

the first prime anticipated significantly greater social identity threat in their future research

career and had lower interest in the Ph.D. program as compared to women reminded about the

improving gender balance. For the latter group, the anticipated threat was the lowest.

Furthermore, the social identity threat negatively affected women's expectations of a

researcher's career control (Chithambo et al.; Fischer & Bolton Holz, as cited in Tellhed &

Jansson, 2018). Those reminded about the dominance of men in the field were much more likely

to believe that their career success is out of their control and much more worried about becoming

negatively stereotyped and discriminated by gender in a research career. One interesting feature

of this research is that it was conducted in Sweden, which is known to be among the most

gender-equal countries in the world (World Economic Forum, 2017) and have a strong gender

equality ideology (SOU 2014; Wahl 1992). Armenia, on the other hand, is far from being

renowned as a gender-equal country.

The Constitution of the Republic of Armenia (2015) states the equality of genders and

bans discrimination on the ground of sex (Articles 29 & 30, Chapter 2). However, as Osipov and

Sargizova (2016) suggest, "the de jure equality does not necessarily translate into the de facto

gender equality" (p. 14). Armenia ranks No. 62 among 122 observed countries by its gender

inequality (Human Development Report, 2015); No. 61/168 by gender equity (Social Watch,

2012); No. 57/113 by women's economic opportunity (Chartsbin, 2015); and No. 105/145 by

global gender gap (World Economic Forum, 2015) indexes. Hence, women are still at a

considerable disadvantage in most spheres of public, political, and economic life. According to

Yerevan State University (YSU) 2015 report, Armenian society's expectations from men in

domains like family life, education, provisions of financial security, and politics are higher than

those from women. For example, the 2016 nation-wide survey conducted by Osipov and

Sargizova shows that 42.5% of people believe that "women should leave politics to men," and

73.1% of men and 66.7% of women believe that women are too emotional to be leaders in their

communities (p. 19). In fact, the inequality between the two genders is recognized by the

majority of Armenian society. Almost 60% of respondents surveyed by YSU (2015) agreed that

there is "inequality among men and women in Armenia society" and almost 23% said, "most

likely there is" (p. 16). Only about 8% of the respondents denied that gender inequality exists in

Armenian society.

Key Terms and Definitions

FIDE, rating, chess titles, Woman Grandmaster, female Grandmaster

FIDE

The World Chess Federation is referred to as FIDE because of its French acronym, Federation Internationale des Echecs. The International Olympic Committee recognized FIDE as an International Sports Federation in 1999. Today it connects 191 member federations and acts as the governing body of international chess competitions (World Chess Federation, 2009).

FIDE rating system

The rating system used by FIDE is a numerical system that produces "scientific measurement information of the best statistical quality" to estimate chess players' strength (*FIDE rating regulations effective from 1 July 2017,* sect. 8). Based on their performance in rated tournaments, chess players receive rating points, which indicate their level of play. The highest ever chess rating was 2882 held by the 16th World Champion Magnus Carlsen in May 2014 (World Chess Federation, 2014).

Chess Titles

Chess titles, like the ratings, are given to players based on their tournament performance. FIDE acknowledges eight titles: Grandmaster (GM), International Master (IM), FIDE Master (FM), Candidate Master (CM), Woman Grandmaster (WGM), Woman International Master (WIM), Woman FIDE Master (WFM), Woman Candidate Master (WCM).

The two main criteria by which a player receives a title norm are the average rating of their opponents and the player's performance against them. Importantly, a player has to achieve two or more title norms "in tournaments covering at least 27 games" in order to receive a particular title (*FIDE title regulations effective from 1 July 2017*, sect. 1.51). For example, a norm for a GM title, the highest one in chess, can be given to a player who, during an international tournament, reaches 2600 or higher performance rating against opponents with an average rating of 2380 or more. A WGM norm, in turn, is given to female players who reach 2400 or higher performance against opponents with an average rating of 2180 and above (sect. 0.5).

As can be seen from the list above, chess titles are divided into women and open types. Women titles have lower requirements and are available only for female chess players. In fact, the requirements for an International Master (IM) title are higher than those for a Woman Grandmaster (WGM). For this project, it is vital to understand the difference between Woman Grandmaster and female Grandmaster. The former is a title given only to females. The latter, on the other hand, refers to female chess players who managed to qualify for the highest Grandmaster title.

Research Questions

The question of female underperformance in chess has been an interest of many researchers, who proposed theories ranging from psychological explanations like stereotyping to statistical ones like differing participation rates of the two genders. This research focuses on Armenia specifically and aims to explore the issues that restrain Armenian female chess players from being rated as high as male players. Given that lower participation rate is an issue also for Armenian women, this research also presents the reasons why only few female players decide to choose a professional career in chess as they grow up. It also devotes much attention to the ways Armenian female players feel about the stereotypes imposed on women in chess.

Methodology

This project intended to understand Armenian female chess players' views and perceptions about specific issues related to their underperformance in the field. Therefore, it used a qualitative methodological approach to attain a profound understanding of the existing problems. The primary research method was interviews. In particular, ten people, four members of the Armenian women's national chess team, their coach, and five champions of the 2018 Armenian Youth Chess Championships under different age categories, were interviewed. In around 20-minute interviews, the questions of which can be found in Appendix 1, the players were asked to reflect on the issues they had encountered throughout their chess careers. All interviews were conducted in Armenian and translated into English. The choice of the interview participants was made according to several criteria.

First, the level of success was considered an essential criterion, since the strongest female players have higher chances to succeed among men than the weaker ones. For this reason, the main focus was put on the national team members. Given that the top three members of the national team are chosen according to their rating and the other two qualify from the Armenian Championship, they are considered the strongest female players in the country. Moreover, by being in the team, they get to participate in more international tournaments gaining valuable experience, which was assumed to guarantee relatively deeper observations on the research topic. Hence, interviews were conducted with all national team members except for Lilit Mkrtchian, the second highest rated female player in Armenia, with whom some arrangement problems occurred.

The interview with Zaven Andriasian, the national team coach and chess Grandmaster, aimed to provide the standpoint of not only the person who prepares the team for the games and

knows their weak sides well but also of a male professional player. Andriasian was asked to

reflect on the difficulties that female players have to face in Armenia and the reasons for their

underrepresentation in the field.

Secondly, age was an important criterion as well, since the responses from players of all

age categories could give some understanding of the road by which Armenian female players

move along throughout their career. Thus, the winners of the 2018 Armenian Youth Chess

Championships in the categories of girls under the ages 10, 12, 14, 16, and 18 were also

interviewed. The parents of all underage players gave their oral consent for their children's

participation in this project. Two of the national team members signed a printed consent form,

while the others were interviewed via phone conversation and, therefore, gave only an oral

agreement.

Alongside with interviews, some analysis was done to understand the correlation of

female players' performance and the amount of practice they do. The information about players'

international ratings was taken from the official website of the World Chess Federation

(fide.com), where all registered chess players have profile pages. The national ratings and

standings, in turn, were taken from the official website of the Armenian Chess Federation

(chessfed.am). Finally, the players' results in different tournaments were found on the website

chess-results.com, whose archive contains 345.000 national and international chess tournaments.

Research Findings and Analysis

According to the January 2019 national rating list of the Armenian Chess Federation, there are 4737 registered chess players in Armenia, and only 487 of them are females. The disparity of numbers is analogous to that of the male and female players worldwide. Moreover, if out of 1668 active grandmasters worldwide, only 29 are females (World Chess Federation, n.d.-h), Armenia has only one female grandmaster among 48. How can this dominance of male chess players be explained? "Easy!" Elina Danielian, the only female grandmaster in Armenia and six-time Armenian women's champion, states, "Men have much less to worry about. They can completely devote themselves to chess, while we need to focus also on our daily concerns."

Elina is married and has a two-year-old child. Her training in chess inevitably suffers due to all the daily work that Armenian wives and mothers need to do. However, as Zaven Andriasian, the coach of the Armenian women's national chess team, notes:

> Having so many responsibilities besides chess, she still manages to play world-class chess and represent the team on the top board. If she can maintain a 2400+ rating at 40, what prevents our 17-20-year-old girls, who do not yet have that many concerns as Elina, to at least reach close to her rating?

According to Andriasian, there are just too many things that prevent girls from succeeding: discipline in training, belief in themselves, and most importantly, will to succeed. "Girls do not like to fight till the end; they want it to be easy, but it is not going to," he explains.

Zaven Andriasian became the coach of Armenian women's national team in 2018. He first joined the previous coach, Artur Chibukhchian, to present a well-prepared team for the 2018

Chess Olympiad in Batumi, the most prestigious team event in the chess world. The Armenian team was among the leaders up until the last three rounds. They caused one of the biggest upsets of the Olympiad by defeating the top-seed Russian team 3-1. Even after three consecutive losses in the last three rounds, the team finished sixth (Chess-Results, 2018-c) earning a right to participate in the World Team Championship, something that the men's national team failed to do (Chess-Results, 2018-d). The older members of the women's national team attribute their success to the freshness that the young girls, Siranush Ghukasyan and Anna Sargsyan, brought with them and to their new coach, while the modest youngsters rank the role of their new coach higher.

Nevertheless, Zaven Andriasian's commitment to his work is highly appreciated both by the team members and by the Armenian Chess Federation, which, after the Olympiad, trusted him to train the national team singly. The main aspects on which Andriasian focused after becoming the team coach were disciplined training and winning psychology. According to him:

Women's main problem is that they always think that they are weak and cannot play well. I make them train like men so that they perceive chess like men. If they would previously think that it is ok for them to play badly because they are a girl, now I do not accept such justifications. I explain to them that their gender does not matter here; they have to try to play their best and fight until the end. I think psychological issues have a big impact on them. There are other problems, as well. For example, women are not disciplined in terms of their training. They do not like to practice for a long time. If these and a few similar things are corrected, they will be able to achieve a higher level of play.

However harsh Andriasian's words seem to sound; they are also accepted by the most successful female players in Armenia. Especially in terms of training, the national coach seems to hit the point. Mariam Avetisyan and Mane Hovhannisyan, the 2018 Armenian youth chess champions in the categories of girls under the ages of 18 and 16 respectively, and all of the interviewed national team members said they do not practice chess much on their own. Some of them have more important things to care about, such as family and education, while others accept they are just too "lazy" to practice chess independently. As to the younger players, only Seda Badalyan, the 2018 champion of girls under 12, said she currently practices chess from three to four hours a day, and she started to practice like this only recently. The other young champions mostly limit their training on solving chess puzzles assigned by their coaches.

The players interviewed are arguably the strongest female players in the country, at least in their age categories. Given the fact that they perform better than their peers with such little training, it is undeniable that the overwhelming majority of their peers practice chess much less. Three to four hours of daily practice is considered a norm for chess players, but it is not the intense training which can give a girl competitive results in open tournaments. Elina Danielian practiced chess five to six hours a day on average. Sometimes, her chess training went for up to eight hours. As a result, she became the first and, until now, the only female grandmaster in the country. Although there is no information on the exact amount of time that successful chess players devote to practicing chess, it is undeniable that practicing is of paramount importance. In a 2013 interview on Chess TV, Sergey Shipov, a chess grandmaster, ex-member of Garry Kasparov's team, and a trainer of many talented grandmasters, noted that the question of the number of training hours is the concern of many ambitious chess players. "If I tell you right now that you have to practice chess for six hours every day, but you will get exhausted after only

three, then the remaining three hours will just be a waste" (3:10). According to Shipov, some

players such as Sergey Karjakin and Fabiano Caruana, the World Championship challengers in

2016 and 2018 respectively, are able to practice chess nine hours a day, while others like

Magnus Carlsen practice less but maintain the effectiveness of their training. As a former chess

player who played chess for about eight years and still is in touch with many professional male

and female chess players, I heard about several Armenian male players who practiced chess for

eight hours a day and not even a single female player who did the same. There comes a period

for female players when they start intensifying their chess training, like 12-year-old Seda

Badalyan, who practices three hours daily, but the problem with girls is that they do not maintain

the pace of their training for a long time.

Mariam Avetisyan, the last year champion under 18-year-old girls, used to train even

harder when she was at Badalyan's age. She used to practice chess for many hours every day

because her coach would assign "a ton of homework," as she puts it. This was the time of her

rise. Her national rating reached above 2000, which was a remarkable achievement for a girl of

her age. Moreover, in the 2013 Andranik Margaryan memorial, she took second place among

boys under 14 (Chess-Results, 2013-a). She achieved another remarkable tournament victory in

Jermuk-2013 international youth open under-14. The open sections, although open for both

genders, are mostly played by boys, because the competition in them is relatively stringent, and

girls prefer to participate in girls' sections to increase their chances of victory. For example, out

of 35 participants of the Jermuk-2013 tournament, only six were females (Chess-Results, 2013-

b). This statistic should clarify the significance of Avetisyan's achievement. Now Avetisyan is a

first-year student at the Armenian State Institute of Physical Culture and Sport, which means she

has made her choice to pursue a professional career in chess. Nevertheless, she does not practice

chess outside of her university classes. The main reason, she says, is her laziness. "I lost the joy

of training because of too much training. Now I am just too lazy to force myself to work on

chess."

Anna Sargsyan, who is the youngest member of the Armenian national team and

represents it on the third board, also had similar achievements in boy-dominated tournaments.

She took the champion title in the Jermuk-2013 international youth open under-12 (Chess-

Results, 2013-c). Moreover, her 2029 national rating at that age was quite high even among

boys. She was the second highest rated participant of the tournament. As of May 2019, Sargsyan

has a 2290 FIDE rating (World Chess Federation, n.d.-d). Her peak rating was 2357 in 2018

when she trained much harder than now. Thanks to the national team training, she manages to

stay in form, but she has also stopped practicing chess independently. Her friend, Siranush

Ghukasyan, the second youngest team member, reported the same issue. Both of them suggested

half-jokingly that the reason for their reluctance is that girls are interested in other things, such as

their appearance.

Female chess players' concerns about their appearance can, in fact, be considered as one

criterion for their underperformance, since Sargsyan and Ghukasyan are not the only ones who

speak about them. For example, during one of the series of Evening Urgant show, Alexandra

Kosteniuk (2015), the highest rated female chess player in Russia and former women's world

champion (World Chess Federation, n.d.-e), suggested that the influence of players' appearance

on their chess game is much bigger in women's chess. "Self-confidence," she stated, "increases a

woman's rating by at least 100 points. And a confident woman is the one who is dressed, made-

up, and with a manicure" (5:58). Elina Danielian also supported the idea that the way females

look influences their performance. "How can you do something well if you are not satisfied with

the way you look?" Nonetheless, this did not stop Elina from practicing chess five to six hours a

day when she was young. If truth be told, however, she did most of the practice together with

her coach rather than on her own. Elina also noted that male chess players do not have a similar

issue, as they do not care much about their appearance. The 2015 report by YSU, in turn,

indicates that Armenian society puts more pressure on women to take care of their appearance

than on men. The findings suggest that about 61% think that it is "very important" for an

Armenian woman to always take care of their appearance, while less than 51% think it is very

important for a man as well (Yerevan State University, 2015, p.14).

The concerns about one's look were much less explicit among younger chess players.

None of the interviewed champions reported to be disturbed by such issues. Instead they

mentioned another significant reason for little practicing: their school homework. Most girls try

to keep a high academic standing alongside with chess. Elen Mirzoyan, Seda Badalyan, and

Mane Hovhannisyan, who were the 2018 champions of Armenian Youth Championship under

the age categories of girls 10, 12, and 16 respectively, mentioned that they have always given

higher importance to their academic success than to chess. If Hovhannisyan already quit chess to

work on her exams for university, the other two champions noted that they will stop playing

chess if they are not able to maintain good standing at school anymore. I quit chess the year I

became the champion of Armenia in the category of girls under 18 to prepare for my university

entrance exams. I even refused to take part in that year's World Youth Championship because I

was afraid I would have not gained as high scores as I wanted. These examples are consistent

with YSU 2015 findings, which suggest that "for women, it is relatively more important to be

educated, while for men, it is more important that society acknowledged them..." (p.11).

Zaven Andriasian also referred to the incompatibility of high academic endeavors and chess career. He suggested looking at the participants' list of the 2019 Armenian Girls Chess Championship under 18, which failed to gather enough participants (Chess-Results, 2019-c). All the finals of Armenian Youth Championships feature at least ten players, while the under 18 age category of girls championship saw only five. Andriasian revealed that they even had to convince some of the participants to play in the championship. He went on presenting the issues of Armenian female players rather descriptively:

There are many problems for girls in Armenia. As it often happens, a girl gets strong at some age, and then her parents tell her she has to study instead. They decide she needs to enter a university, so she starts taking additional classes to pass the university exams and, therefore, stops practicing chess. Then there is another problem. When women get married, their husbands often do not let them practice anymore. I do not know why, but they do not let them play. These are some of the issues; if they are solved, I do not see any reason why women in Armenia cannot succeed in chess.

Siranush Ghukasyan and Maria Gevorgyan also suggested that for a woman chess player, marrying means making a cross on her chess career. The difficulties that married women face with regards to their career shows Armenian society's low value of women's success. According to the survey conducted by Yerevan State University (2015), 74% of respondents perceive having a successful career as very important for a man, and only 43% think it is very important for a woman too (p.13). This finding seems to be true for the Armenian chess world as well.

Thus, the fact that female players are not confident about their chess abilities or that they pay so much attention to their looks that it intervenes with their chess performance also reflects

the stereotypes and values of the society they live in. Interestingly, however, neither Ghukasyan and Sargsyan nor Danielian, all of whom stressed the importance of a woman's look, admitted that stereotypes influence them. All three claimed that they do not pay attention to what people say about female players. These claims, however, were not consistent with their other points. For example, Sargsyan, when first asked to explain male dominance in chess, suggested that men are smarter than women. She explained that even if the common stereotype was different, meaning if women were believed to be smarter than men, she would still hold to her belief. However, a few more questions aimed to clarify whether she believes that women are innately less intelligent than men made Sargsyan change her mind. She rejected that there is an inborn difference in intellect between the two genders, and suggested that the main reason for male dominance in chess must be the fact that they devote much more time to practicing chess. Ghukasyan, in turn, suggested that some of the stereotypes about women chess players, such as the one that they cannot practice for a long time and tend to lose their focus shortly, are true. Others, according to her, are false. She confronted an Armenia-specific stereotype that Armenian female players cannot reach the level of successful international female players like Hou Yifan.

Most of these answers suggest that Armenian female players lack awareness about being stereotyped. In fact, most of them were in some sense confused by the questions about stereotypes; they confessed they had never thought about such topics before. The younger players noted that while playing, they try to concentrate on the game itself rather than on the gender of their opponents. However, they also admitted that it is easier for them to play against girls and more instructive to play against boys. The younger players seemed even less conscious of the general issue of stereotyping in chess. Moreover, the stereotypes for the national team members and other female players were different. For example, those players who are not in the

national team did not mention about the significance of one's appearance. This may be related to their age, as the non-members were mostly younger, or to their less participation in international tournaments which usually receive media coverage. Remarkably, those players who give high importance to other fields besides chess, such as education, had the most thorough observations with regards to male dominance in chess. Siranush Ghukasyan, a third-year-student at National University of Architecture and Construction of Armenia, Maria Gevorgyan, a graduate of Armenian State Institute of Physical Culture and Sport, who is now defending her Ph.D. at the Armenian State Pedagogical University, Mane Hovhannisyan, who is currently studying to enter Yerevan State University are among these players.

Mane Hovhannisyan offered several explanations for male dominance. According to her, the amount of training has a significant role; however, men have also a physical advantage, which helps them stay concentrated for a longer time than women. On the other hand, Hovhannisyan did not believe in females' innate intellectual inferiority. Interestingly, both she and Mariam Avetisyan, the previous under 18-year-old girls champion, were quick in responding to the question about intellectual differences between the genders. They claimed that girls are smarter than boys, which, being itself a stereotype or a kind of a self-defense mechanism, may refer to two main phenomena. First, boys at their age behave more childishly than girls, and second, most if not all successful male chess players do almost no classes at school, which can affect the image of their overall erudition.

Maria Gevorgyan, another member of the national team and the winner of the 2019 Armenian Women's Chess Championship (Chess-Results, 2019-d), noted that it was easier to play against male players at a younger age. "It got harder to play against men as I grew up. I do

not know why; maybe because of all the stereotypes to which I was exposed." This view is the

closest to me as a female who played chess for eight years. In the beginning, I would not even

ponder upon the gender of my opponents. I qualified for the first rank, the highest rank before

the chess titles, at my very first year of playing, something that all the boys at my chess-school

group failed to. And I learned the game at nine, quite an old age to begin a sports career. It is

important to note that rank qualification tournaments were all in an open format meaning that

boys and girls had to play together. Of course, outside of my chess-school group, many boys also

received the first rank that early in their career. The question is in participation rates. According

to the January 2019 national rating list of the Armenian Chess Federation, only about 10% of all

registered chess players in Armenia are females. As Siranush Ghukasyan stated:

> First of all, the number of men playing chess is much greater than that of women, and,
>
> naturally, there are more talented players among men than women. It is also a stereotype
>
> that girls are less talented. There is simply less competition in women's chess, and it is
>
> harder for us to gain experience. That is why only few women succeed in chess.

Interestingly, the most stereotypical observations on male-female differences in chess

were made by the only two players, Anna Sargsyan and Asya Yedigaryan, who decidedly

admitted that they are going to pursue a chess career. They both started with a statement about

males' innate superiority over females and later suggested that male dominance can also be

explained by the amount of chess training they do. However, if Sargsyan, 18, stopped on this

point, Yedigaryan, 14, put it this way:

> Boys have better logic than girls. In mathematics, it is the same. As they say, it is a male
>
> subject. I think in chess too boys are stronger and smarter than girls… If I practiced chess

more, I cannot say what would happen. I do not know; maybe we could play as strong as boys if we trained really hard, but in the end, we would still yield on something.

The statements of Sargsyan and Yedigaryan suggest that professional players submit to the stereotypes about women in chess from a young age and begin their career with those beliefs in mind. Sargsyan also noted it was already clear that men are stronger in chess when she was just starting to play. With such stereotypical beliefs in mind, it is hard to have ambitions about winning open tournaments and performing on an equal level with men.

Notably, all players above the age of 12 agreed that if the general attitudes toward female chess players were different, they would have treated chess and their chances in it more seriously. The younger players were reluctant to reflect on stereotypical issues. The belief in women's success in chess is rather weak in Armenia. Even Zaven Andrasian, despite his great devotion to training the women's team, stated that women will not be able to play as well as men even if they train harder. The attitude of chess coaches toward their female trainees is often skeptical. Many of them even express their distrust in female students when they have to face stronger opponents. All the national team members except for the youngest, Anna Sargsyan, recalled cases when chess coaches made discouraging statements right before the game. The most famous statement by the coaches is that "drawing will be very good because the opponent is much stronger." According to Danielian, "A coach has no right to say something like this to their student. Naturally, the student failed to play a good game because she got frightened by understanding that she is weak and therefore, lost the game."

Anna Sargsyan failed to recall any concrete stories when coaches discouraged her before the game. However, she noted that even though they did not say anything, it was clear that they

do not believe in her victory. On the other hand, the younger champions, except for Mariam Avetisyan, stated that their coaches always encourage them before the game. It must be noted, however, that the younger players have not yet participated in many international or open tournaments where they would have to play against much stronger opponents. It can also be the case that the younger players think about such psychological influences much less than the older and more experienced players. Interestingly, I started to make evaluations about psychological issues and their influence on female chess players only after quitting chess at 16.

The impact of the attitudes of surrounding players, coaches, and federation members is rather significant. Siranush Ghukasyan admitted that she has always felt the difference in the Federation's attitude toward girls and boys. "I think this is another reason why girls treat chess frivolously," she suggested. "They think they will not be given the same attention no matter what they do." Ghukasyan also suggested that providing female players with qualified coaches who would feel responsible for doing their best would be of great help for them. Mariam Avetisyan added that if the coaches had higher expectations of girls, girls would play more seriously. Even Asya Yedigaryan, who claimed that men are inherently stronger in chess, suggested that if girls were treated differently, they would be more self-confident. "Now they say boys are stronger anyways, and it makes girls think they cannot strive for more because boys will always be stronger," she complained.

It is a problem that Armenian girls and women are expected to perform well in women's tournaments but not to reach the level of men. When female players win a strong women's tournament, they are said to play well. When they perform well in open events, however, it means they play like men, because a truly good chess player is thought to be a male player.

When asked whether there is any difference between Judit Polgar and male grandmasters, 14th World Champion Vladimir Kramnik (2004) said, "No, she plays chess like a man" (para.41). Maria Gevorgyan recalled a case when someone approached her after a fine victory to say that she "played like a man." "We are supposed to take it as a compliment," Gevorgyan noted. "It is not clear why, but it is thought to be a good thing. And when women play badly, they say 'ah, this is women's chess.' There has always been a difference."

Limitations and Avenues for Future Research

The findings of this research should be viewed with regard to several limitations. The research focused on the most successful female chess players in Armenia, which left a considerably big number of players out from the survey. The small number of participants can result in the negligence of a range of opinions and suggestions. Undoubtedly, a larger-scale survey will give more validity to the findings of this research.

Secondly, females' performance and beliefs are also influenced by their male colleagues. The opinions of male players can shed new light on the picture of women chess in the country. Zaven Andriasian's observations on the topic of women's chess were highly prudent and profound, which emphasizes the significance of exploring the male viewpoint on female issues in the field. The collection of male opinions on this topic is an attractive avenue for future research.

Lastly, the interviews showed that most female players are not conscious of being stereotyped and give little thought on stereotypical issues. An interesting avenue for further research can be the surveillance of performance changes of a group of female players who have been introduced to the issues and effects of stereotypes on the female play. It may be the case that higher awareness and understanding of stereotypical issues can positively impact the confidence and performance of female chess players.

Conclusion

The reasons for Armenian female chess players' underperformance range from their unwillingness to practice to the lack of self-confidence. Most female players practice chess too little and fail to reach competitive results among male players. Some of them, especially the younger ones, give much higher importance to their education and are unable to devote sufficient time to chess during their school years. As they grow up, many of them quit chess to study in universities. Given that a smaller number of girls are brought to chess schools, the departure of these girls from chess further increases the disparity of participation rates between men and women.

Nevertheless, those who choose a career in chess also devote little time to their training. They fail to stimulate themselves to practice chess independently, which brings forward the significance of coaches for women players' success. Furthermore, female players become a victim of stereotypes from an early age and waste the belief that they can play on an equal level with men. This results in a lack of confidence and belief in their abilities, which serves as a further discouragement to practice chess seriously. Significantly, most female players lack awareness of being stereotyped, which can contribute to the process of turning the stereotypes into their personal beliefs.

References

4 Chinese students win Rhodes Scholarships among 12,000 global candidates. (2017). *China Daily*. Retrieved from http://global.chinadaily.com.cn/a/201712/08/WS5a2-a05b8a3101a51ddf8e3be.html

Ahmadov, Z. (2007). Women in chess – a matter of opinion. *ChessBase*. Retrieved from https://en.chessbase.com/post/women-in-che-a-matter-of-opinion

Armenia Population (LIVE). (n.d.). Retrieved May 23, 2019, from https://www.worldometers.-info/world-population/armenia-population/

Armenian Chess Federation. (2019). Retrieved May 17, 2019, from http://chessfed.am/rankings

Bilalic, M.; Smallbone, K.; McLeod, P.; and Gobet, F. (2009) Why are (the best) women so good at chess? Participation rates and gender differences in intellectual domains. *Proceedings of the Royal Society B*. doi: 10.1098/rspb.2008.1576.

Burke, P. J. & Stets J. E. (2009). *Identity Theory.* Oxford University Press.

Campitelli, G., & Gobet, F. (2008). The role of practice in chess: A longitudinal study. *Learning and Individual Differences, 18*(4), 446–458.

Chess-Results. (2013-a). Անդրանիկ Մարգարյանի հուշամրցաշար - 2013 Ա2 - մինչև 14տ. [Andranik Margaryan memorial - 2013 A2 - under 14]. Retrieved from http://chess-results.com/tnr89381.aspx?lan=1&art=1&rd=9

Chess-Results. (2013-b). Jermuk-2013 int. youth open under - 14. Retrieved from http://chess-results.com/tnr104965.aspx?lan=21&art=1&rd=9

Chess-Results. (2013-c). Jermuk-2013 int. youth open under - 12. Retrieved from http://chess-results.com/tnr104968.aspx?lan=66&art=1&rd=9

Chess-Results. (2018-a). Chess.com Isle of Man international chess tournament - masters. Retrieved from http://chess-results.com/tnr385685.aspx

Chess-Results. (2018-b). FIDE women's world championship round I-V. Retrieved from http://chess-results.com/tnr389448.aspx?lan=1&art=0&fed=CHN- &turdet=YES

Chess-Results. (2018-c). 43rd Olympiad Batumi 2018 women. Retrieved from http://chess-results.com/tnr368909.aspx?lan=1&art=0&turdet=YES&flag=30

Chess-Results. (2018-d). 43rd Olympiad Batumi 2018 open. Retrieved from http://chess-results.com/tnr368908.aspx?lan=1&art=0&turdet=YES&flag=30

Chess-Results. (2019-a). Prague international chess festival - masters. Retrieved from http://chess-results.com/tnr420482.aspx?lan=1

Chess-Results. (2019-b). Prague international chess festival - challengers. Retrieved from http://chess-results.com/tnr420486.aspx?lan=1&art=1&turdet=YES&flag=30

Chess-Results. (2019-c). Հայաստանի 2019թ. Ա-18 առաջն. եզրափակիչ [2019 Armenian girls-18 championship final]. Retrieved from http://chess-results.com/tnr430909.as-px?lan=1

Chess-Results. (2019-d). 74-th Armenian women's CH. The highest league. Retrieved from http://chess-results.com/tnr403297.aspx?lan=1&art=1

Constitution of the Republic of Armenia. (2015). Article 29, Chapter 2. Retrieved from https://www.president.am/en/constitution-2015/

Constitution of the Republic of Armenia. (2015). Article 30, Chapter 2. Retrieved from https://www.president.am/en/constitution-2015/

Evening Urgant (2015). *Вечерний Ургант. Александра Костенюк, Ян Непомнящий, и Пётр Свидлер [Evening Urgant. Alexandra Kosteniuk, Ian Nepomniachtchi, and Peter Svidler]*. Retrieved from https://www.youtube.com/watch?v=cVW6uu8x3eY&t=2s

Federations Ranking. (n.d.-a). Retrieved May 23, 2019, from https://ratings.fide.com/topfed.p-html

Federations Ranking. (n.d.-b). Retrieved May 23, 2019, from https://ratings.fide.com/topfed.ph-tml?tops=1

Friedel, F. (2006). Chess prodigies and mini-grandmasters. *ChessBase*. Retrieved from https://en.chessbase.com/post/che-prodigies-and-mini-grandmasters

Inzlicht, M., & Schmader, T. (2011). *Stereotype Threat: Theory, Process, and Application.* Oxford University Press.

Meyer, M., Cimpian, A. & Leslie S. J. (2015). Women are underrepresented in fields where success is believed to require brilliance. *Frontiers In Psychology*. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4356003/

Osipov, V. & Sargizova, J. (2016). *Men and gender equality in Armenia: Report on findings of the sociological survey.* Retrieved from United Nations Population Fund Armenia website: https://armenia.unfpa.org/sites/default/files/pub-pdf/MEN%20AND%20G-ENDER%20EQUALITY_Final_0.pdf

Poletukhin, F. (2013). *Шипов Сколько заниматься в день шахматами [Shipov: How long should you practice chess per day]*. Retrieved from https://www.youtube.com/w-atch?v=dFDIAK7vQiM

Prague International Chess Festival. Retrieved May 23, 2019, from http://praguechessfestiv-al.com/

Rothgerber, H. & Wolsiefer, K. (2014). A naturalistic study of stereotype threat in young female

      chess players. *Group Processes & Intergroup Relations, 17*(1), 79–90.

Schank H. (2015). Where's Bobbi Fischer? *Aeon*. Retrieved from https://aeon.co/essays/why-

      are- only-two-of-the-world-s-top-100-chess-players-women

Schwabe, A. (interviewer) & Kramnik, V. (interviewee). (2004). Vladimir Kramnik: 'Chess is so

      deep, I simply feel lost' [Interview transcript]. Retrieved from ChessBase:

      https://en.chessbase.com/post/vladimir-kramnik-che-is-so-deep-i-simply-feel-lost-

Stafford, T. (2018). Female Chess Players Outperform Expectations When Playing Men.

      Psychological Science, 29(3), 429–436.

Tellhed, U. & Jansson, A. (2018). Communicating gender-equality progress reduces social

      identity threats for women considering a research career. *Social Sciences, 7*(18),

      doi:10.3390/socsci7020018

Watson, L. (2017, December 2). Garry Kasparov: I was wrong about women playing chess. *The

      Telegraph.* Retrieved from https://www.telegraph.co.uk/news/2017/12/02/garry-kas-

      parov-wrong-women-playing-chess/

West, V. (2017). Should Women's Chess Titles Be Eliminated? *US Chess Federation.* Retrieved

      from https://new.uschess.org/news/should-womens-chess-titles-be-eliminated/

World Chess Federation. (2009). *FIDE - World Chess Federation.* Retrieved from

      https://www.f- ide.com/fide/fide-world-chess-federation.html

World Chess Federation. (2014). Top 100 players May 2014 - archive. Retrieved from https://rat-

      ings.fide.com/toparc.phtml?cod=305

World Chess Federation. (2017). *FIDE rating regulations effective from 1 July 2017*. Retrieved

      from https://www.fide.com/fide/handbook.html?id=197&view=article

World Chess Federation. (2017). *FIDE title regulations effective from 1 July 2017*. Retrieved from https://www.fide.com/fide/handbook.html?id=198&view=article

World Chess Federation. (n.d.-a). Retrieved May 21, 2019, from https://ratings.fide.com/card.phtml?event=8603006

World Chess Federation. (n.d.-b). Retrieved May 21, 2019, from https://ratings.fide.com/card.phtml?event=1503014

World Chess Federation. (n.d.-c). Retrieved May 21, 2019, from https://ratings.fide.com/card.phtml?event=13300210

World Chess Federation. (n.d.-d). Retrieved May 21, 2019, from https://ratings.fide.com/card.phtml?event=13308130

World Chess Federation. (n.d.-e). Retrieved May 21, 2019, from https://ratings.fide.com/card.phtml?event=4128125

World Chess Federation. (n.d.-f). Retrieved May 21, 2019, from https://ratings.fide.com/id.phtml?event=700070

World Chess Federation. (n.d.-g). Retrieved May 21, 2019, from https://ratings.fide.com/card.phtm- l?event=8602980

World Chess Federation. (n.d.-h). Advanced search results. Retrieved May 21, 2019, from http://ratings.fide.com/advaction.phtml?idcode=&name=&title=g&other_title=&country=%25&sex=&srating=0&erating=3000&birthday=&inactiv=on&radio=name&line=asc

Yerevan State University. (2015). *Gender Barometer Survey*. Retrieved from http://ysu.am/files/-Gender%20Barometer.Armenia.English.pdf

Appendices

Appendix 1

   A. Interview questions for the members of Armenian women's national chess team.

1. At a younger age, how did you feel about playing against males? (against boys of your age and older)

Երիտասարդ տարիքում ինչպես էիք վերաբերվում ձեր եւ ավելի բարձր տարիքի տղամարդկանց դեմ խաղալուն:

2. Was there a specific age when you felt that you may be less competitive than male players?

Եղել է այնպիսի տարիք, երբ Ձեզ ավելի քիչ մրցունակ եք զգացել տղամարդկանց համեմատ:

3. Have you ever had a female coach?

Երբեւէ կին մարզիչ ունեցել ե՞ք:

4. Have your coaches expressed disbelief in the chances of yours or females, in general, to succeed against a strong male player?

Երևէ Ձեր մարզիչները անվստահություն արտահայտել ե՞ն Ձեր կամ ընդհանրապես կանանց ուժեղ տղամարդ շախմատիստների դեմ պայքարում հաջողության հասնելու հնարավորությունների վերաբերյալ:

5. To what do you attribute the male dominance in chess?

Ինչո՞վ կբացատրեք շախմատում տղամարդկանց գերիշխանությունը:

6. Do you think you could play on an equal level with your male peers if you had trained harder?

Ինչքա՞ն եք օրական տրամադրում շախմատին: Կարծում եք արդյոք որ կկարողանայիք տղաների հետ խաղալ հավասարը հավասարի, եթե ավելի շատ պարապեիք:

7. During your most successful open tournaments, what helped you perform well against stronger male opponents?

Առավել հաջողակ բաց մրցաշարերում ի՞նչն է Ձեզ օգնել լավ հանդես գալ ուժեղ տղամարդ մրցակիցների դեմ:

8. To what extent do the stereotypes imposed on women by the chess world influence your performance?

Որքանո՞վ են շախմատային աշխարհի կողմից կանանց վրա դրված կարծրատիպերը ազդում ձեր կատարողականի (հաջողության, խաղի) վրա:

9. Do you think women are generally less talented than men?

Ի՞նչ եք կարծում, կանայք, ընդհանուր առմամբ, ավելի քիչ տաղանդավոր են քան տղամարդիկ:

10. Women's team managed to qualify for the World Team Championship 2019 due to their good performance in the Olympiad, while men's team failed. What can be the reasons for such a change?

Կանանց թիմը հաջողեց որակավորվել 2019 թ. Աշխարհի թիմային առաջնության համար ի շնորհիվ օլիմպիադայում իրենց ցուցադրած լավ խաղի, իսկ տղամարդկանց թիմը չկարողացավ: Որոնք կարող են լինել այս փոփոխության հնարավոր պատճառները:

11. Are you satisfied with the federation's support? What would you like it to do to endorse women play chess?

Գոհ եք ֆեդերացիայի աջակցությունից: Ի՞նչ կցանկանայիք այն աներ` կանանց շախմատը աջակցելու համար:

   B. Interview questions for young champions

Interview questions for the champions of 2018 Armenian Youth Chess Championships.

1. How much do you train? How many male players are there in your group? Ինչքա՞ն ես պարապում: Ձեր խմբում քանի՞ տղա կա:

2. How do you evaluate your chances of victory in the upcoming Armenian Youth Championship and how would you evaluate your chances among the male players of your same age group? Ինչպե՞ս ես գնահատում գալիք Հայաստանի առաջնությունում քո հաղթանակի հնարավորությունները, եւ ինչպե՞ս կգնահատեիր քո հնարավորությունները նույն տարիքային խմբի տղաների առաջնությունում:

3. Do you prefer playing against male or female players? Was there any age that you felt it was easier to play against male rather than female opponents? Նախընտրում ես խաղալ տղամարդ թե՞ կին շախմատիստների դեմ: Եղե՞լ է այնպիսի տարիք, որ ավելի հեշտ տղաների հետ խաղայիր:

4. Why do you think there have to be separate championships for girls and boys? Do you think there is some difference between the strength of male and female players? Why there might be? Ի՞նչի համար են պետք առանձին առաջնություններ աղջիկների եւ տղաների համար: Կարծում ես կա՞ն տարբերություններ, տղամարդկանց եւ կանանց ուժերի միջեւ: Որոնք են հնարավոր պատճառները:

5. If you trained harder, would you have equal chances among boys? Եթե ավելի շատ ժամանակ հատկացնեիր շախմատին, հավասար հնարավորություններ կունենայի՞ր տղաների խմբում:

6. Until what age do you plan to continue your career in chess? Մինչև ո՞ր տարիքն ես նախատեսում շարունակել քո շախմատային կարիերան:

7. Who supports your chess career most? (coach, parents, you) Ո՞վ է առավելապես աջակցում քո շախմատի կարիերային: (մարզիչը, ծնողները, դու)

8. Do you feel like your coach believes in your success when you play against male players? Երբ խաղում ես տղամարդկանց դեմ, ո՞նց ես զգում՝ մարզիչդ հավատում է քո հաջողությանը:

9. Have you ever had a female coach? If your coach was a strong female player, such as Elina Danielian, would that make you more stimulated and confident? Երբևէ կին մարզիչ ունեցել ես: Եթե մարզիչդ ուժեղ կին շախմատիստ լիներ (օր. Էլինա Դանիելյանը), հնարավոր է որ ավելի մոտիվացված կամ վստահ լինեիր:

10. Does your coach encourage you to participate in open tournaments? Does he or she give importance to them? Քո մարզիչը խրախուսում է մասնակցելու բաց մրցաշարերին: Արդյոք կարևորություն տալիս է նման մրցաշարերին:

C. Interview questions for Zaven Andriasian

1. The women's team had a rise after your appointment as coach. Which aspects did you put the emphasis on after becoming the national coach?

Քո օրոք կանանց թիմը կարծես վերելք է ապրել: Ինչի՞ վրա ես շեշտը դրել երբ դարձել ես հավաքականի գլխավոր մարզիչ:

2. What are the weak sides of female players? How to explain the male dominace in chess? Որո՞նք են կանանց թույլ կողմերը։ Ինչո՞վ է պայմանավորված շախմատում տղամարդկանց գերիշխանությունը։

3. To what extent do the stereotypes affect women's performance?Որքանո՞վ են շախմատային աշխարհի կողմից կանանց վրա դրված կարծրատիպերը ազդում նրանց կատարողականի (հաջողության, խաղի, վստահության) վրա:

4. To what do you attribute the exceptions of Polgar and Hou Yifan?Ինչի՞ն ես վերագրում Պոլգարի կամ Հոու Յիֆանի նման բացառությունները:

5. To what extent are satisfied with the support of the Armenian Chess Federation. What could it do for women's chess? Ինչքանո՞վ եք բավարարված Հայաստանի ֆեդերացիայի աջակցությունից։ Ի՞նչ կցանկանայիք այն անել` կանանց շախմատին աջակցելու համար:

Appendix 2

CONSENT FORM

Consent by a participant to participate in a capstone project conducted at the American University of Armenia (AUA). This is to state that I agree to participate in the capstone project conducted by **Ani Harutyunyan.** The capstone director is Dr. Hourig Attarian of the College of Humanities & Social Sciences at AUA (tel.: 060 612769, email: hourig.attarian@aua.am).

PURPOSE: I have been informed that the purpose of the project is to represent the story of Armenian female chess players. Within the bigger context of the project, the individual life story interview collected by Ani Harutyunyan is meant to shed light on the attitude of the young players toward the stereotypes and values of the chess world.

PROCEDURES: I understand that the interview will be conducted in participants' homes or another appropriate place, and recorded on audio. As a participant, I will be asked to explore the difficulties she has experienced throughout my career as a female player. I have been informed that interviews will take approximately 40 minutes, however, the participants are free to stop at any time, refuse to answer any questions or withdraw from the project at any given point. I understand that if I wish to extend the interview for more than 40 minutes, I will be provided that opportunity.

RISKS AND BENEFITS: I understand that this interview involves the sharing of my personal life story, which will be treated with the utmost care and consideration. I understand that sometimes telling a life story can be upsetting and emotionally difficult. I have been informed that I am free to stop, take a break or discontinue at any time. Given that the interview will be included in a capstone project, which may be published on the official website of the American University of Armenia, with my permission, my story will be heard.

CONDITIONS OF PARTICIPATION: As a participant, I will have access to all the recorded and transcribed data for verification purposes. Throughout the project, if and when the material produced is in Armenian, I will have the opportunity to review and verify the English translations.

__ I understand that I am free to withdraw my consent and discontinue my participation at any time without negative consequences.

__ I understand that the data from this project may be published in print or digital format for academic purposes.

In terms of the **identification and reproduction** of my interview (**please choose one**):

__ I agree **to disclose my identity**. I understand that my identity may be revealed in any publications or presentations that may result from this interview. **I understand that I may mask the identities of other persons appearing in my narratives if I so choose.**

__ I agree to the reproduction of sound from this interview by any method and in any media for academic purposes, which may include webpages, documentary clips, etc.

OR

__ I understand that my participation in this study is **confidential** (i.e., the student-researcher and the course instructor will know, but will not disclose her identity.). **I understand that I may mask the identities of other persons appearing in my narratives if I so choose.**

__ I agree that while data from my interview may be published, no sound from it may be reproduced.

For archiving purposes (please choose one):

__ I agree that transcripts and/or recordings of my interview will be stored at a local archive for long-term preservation. I understand that the course instructor will contact me for further details and additional permission once the archiving considerations have been defined clearly.

OR

__ I understand that once the student project is completed in May 2019, the audio recording will be destroyed by the student (though a copy of the interview may be given to me).

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT TO PARTICIPATE IN THIS STUDY.

INTERVIEWEE:

NAME:

INTERVIEWER:

NAME: Ani Harutyunyan

PARTICIPANT'S SIGNATURE _____ DATE _____

INTERVIEWER'S SIGNATURE _____ DATE
_____

If at any time you have questions about your rights as a participant of this project, please contact Dr. Hourig Attarian of the College of Humanities & Social Sciences at AUA (tel.: 060 612769, email: hourig.attarian@aua.am).