

The Role of Taekwondo Training on the Wellbeing of Adolescents in Addis Ababa

Michael Emru Tadesse

**A Thesis Submitted to the School of Social Work of Addis Ababa University in Partial
Fulfillment of the Requirements of the Degree of Master's of Social Work (MSW)**

Addis Ababa University

Addis Ababa, Ethiopia

November 2014

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The most frequently mentioned problems, in descending order, are: family-related problems, by 17.2% of the respondents, community-related problems and miscellaneous problems, each by 8.1% of the respondents, and injury, by 7.1% of the respondents.

From the interview with the eight TKD adolescents a somewhat different pattern of response emerged. The most frequently mentioned themes by adolescents were: community-related problems, by four adolescents; family-related problems, by two adolescents; no problem at all, by two adolescents; injury (during sparring training), by one adolescent; and miscellaneous problems (rapid weight loss), by one adolescent. Here, it is important to note that except one, all the adolescents who said they faced problem, initially said that there was no problem in TKD itself. For example, interviewee four said:

I mean, I haven't faced any problem in TKD itself. But, some people (youngsters) who know that we practice TKD provoke us on the street...Both males and females do so...I mean, when we walk on the streets, they ridicule us. ...I do not tell my school friends that I practice TKD, because I have seen what happened to me in my neighborhood as a result of telling people about my participation in TKD training (31/5/2014).

Another adolescent also describes the problems he faced in relation to injury and community related problems:

Yes, I was once injured on my hand. It happened while we were sparring in training; we were using powerful strikes. But, I recovered immediately...They [neighborhood peers] mock me saying, 'is this the way you do TKD? We can subdue your TKD with one stone' (Interviewee 5, 7/6/2014).

In the case of the coaches' perception of problems on adolescents as a result of TKD, one theme is mentioned frequently. This theme is community-related problem which is mentioned by

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DECLARATION

I declare that this thesis is my original work and that all sources of materials used for this study have been duly acknowledged.

Michael Emru

Signature  Date 14/01/2015

This thesis has been submitted for examination with my approval as a university advisor.

Name of advisor Meseret Keenen

Signature 

Date of approval 14/01/2015

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ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

This is to certify that the thesis prepared by Michael Emru entitled: "The Role of Taekwondo Training on the Wellbeing of Adolescents in Addis Ababa", and submitted in partial fulfillment of the requirements for the degree of Master of Social Work (MSW) complies with the regulations of the university and meets the accepted standard with respect to originality and quality.

Signed by Examining Committee:

Internal Examiner:

Abebe Assefa

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Acknowledgments

This thesis has become possible as a result of the support and contribution of many people and organizations I cannot thank enough. I would like to express my deep appreciation to my advisor Dr. Meseret Kassahun for guiding me in the research process. I would like to express my deep gratitude to all participants of the study, i.e., TKD clubs, TKD adolescents, TKD instructors, and Entoto Amba Secondary School and its students, for participating in this study. I would also like to thank my trainers of TKD and Master Kiros and his Ethiopian ITF for showing willingness to contribute to this study and for providing me with vital information.

I would like to thank Medhanit Getachew, my girlfriend, so much for helping me in every way she could – loving and encouraging me, translating the questionnaire, transcribing most of the interviews, creating environments by which I accessed essential materials, and the like. I am also so grateful to Fitsum Getachew, her brother, for getting me very crucial materials which I could never access by myself.

I am very thankful for Dr. Dejene Teshome for encouraging me, for commenting on initial ideas of this thesis and on the proposal, and for sharing me very essential materials that I could never get by myself. I would like to thank Rediet Tesfaye very much for his unreserved willingness to help me and for providing me with important materials I could not access.

I would like to acknowledge the help of my colleagues at Mizan-Tepi University; they contributed, among others, in terms of translating and commenting on the scale adopted for this study. I am also indebted to the following people and organizations for their help: Professor Donald Levine, Professor Michael Kennedy, Dr. Adrian Tomin, Professor Robert Cummins, Addis Ababa Sport Commission, and Addis Ababa WTF.

Abstract

The purpose of this study was to investigate the role of World Taekwondo (TKD) training on the well-being of adolescents in Addis Ababa. The study examined the nature of taekwondo training, benefits and problems of practicing taekwondo, and the subjective well-being (SWB) of adolescents in different groups. A concurrent mixed method research design was used. Questionnaires and in-depth interviews were the major data collection procedures. A total number of 116 taekwondo adolescents and four coaches from four taekwondo clubs participated in the study. Results of the study showed that: (1) the taekwondo training provided by the four participant clubs was more of a modern/sport form of taekwondo; (2) taekwondo adolescents and coaches perceived that the benefits of taekwondo for adolescents are multifaceted, i.e., social benefits, physical benefits, mental benefits, self-defense, addiction avoidance, and other benefits; (3) taekwondo adolescents had high level (mean points) of subjective well-being as measured by the Personal Well-being Index-School Children (PWI-SC), i.e., 81.95 (95%CI: 79.70 to 84.20); (4) there was no statistically significant difference among the three groups of taekwondo adolescents (lower level belts ($M=83.89$), middle level belts ($M = 80.38$), and higher level belts ($M = 79.55$) when compared based on their mean points of PWI-SC ($F(2, 81) = 1.58, p > .05.$); and (5) though majority (63.6%) of the respondents claimed that they did not face any problem as a result of practicing taekwondo, the following were identified as major problems that could threaten the well-being of taekwondo adolescents: family related problems, community related problems, and competition related problems. Overall, the results of this study indicated that the training of taekwondo can have a multifaceted positive contribution to adolescents' well-being.

List of Abbreviations

AAU	Addis Ababa University
APA	American Psychological Association
CDC	Center for Disease Control
DHS	Demographic and Health Survey (Ethiopia)
FDRE	Federal Democratic Republic of Ethiopia
GDP	Gross Domestic Product
GTP	Growth and Transformation Plan
ITF	International Taekwondo Federation
IWbG	International Wellbeing Group
KTA	Korean Taekwondo Association
MoH	Ministry of Health
MSW	Master's of Social Work
MYSC	Ministry of Youth, Sports and Culture
NASW	National Association of Social Workers
PWI	Personal Well-Being Index
PWI-A	Personal Well-Being Index - Adult
PWI-SC	Personal Well-Being Index – School Children
SD	Standard Deviation
SWB	Subjective Well-Being
SPSS	Statistical Package for Social Sciences
TKD	Tae kwon do
UN	United Nations
UNICEF	United Nations Children's Fund
UNCRC	United Nations Convention on the Rights of Children
USA	United States of America
WTF	World Taekwondo Federation

material, and spiritual aspects of people (Camfield, Streuli, & Woodhead, 2008; CDC n.d.; Kobau, Snizek, Zack, Lucas & Burns, 2010; Schwannauer, Pontin, Tai, & Kinderman, 2013).

Sport/exercises are usually found by researchers to have positive effects on the well-being of adolescents. Some of the positive effects identified include: physical, psychological, emotional, social, and intellectual developments (Côté, 2009).

Martial art can be placed in the broad category of sport/exercise, as it incorporates many features of sport/exercise. Yet, martial art is beyond sport/exercise since it has its own unique features and these unique features may have their own unique effects on practitioners. "Martial arts are considered to be systems that blend the physical components of combat with strategy, philosophy, tradition, or other features that distinguish them from pure physical reaction (in other words, a technique, armed or unarmed, employed randomly or idiosyncratically would not be considered a martial art)" (Green 2001, p. xvi). There are more than 100 types of martial arts in the world (Lewis, 1996). Based on their ultimate aim, the martial arts can generally be classified into two broad categories, i.e., traditional and modern martial arts. While the traditional martial arts stress respect, meditation, philosophy, and non-aggression, the modern ones emphasize competition and combat (Trulson, 1986).

TKD is one of the most popular martial arts in the world (Lewis, 1996). It has been practiced in 205 countries, including Ethiopia (WTF, n.d.) by more than 30 million people (Park, Park, & Gerrard, 2009). TKD is practiced by different people from different backgrounds and social locations (World Martial Arts Academy, 2013). TKD is also popular among children and adolescents (Park, et al., 2009). In relation to this, it is noted that TKD students begin their TKD career at early ages (TKD PW, 2009, cited in Fong et al., 2011b). TKD could play both positive and negative roles on adolescents' well-being (Binder, 2007; Vertonghen & Theeboom, 2010).

1.2. Statement of the Problem

In this section of the study I would like to discuss two major knowledge gaps in the literature that made me decide to conduct this study. The first gap is the inconsistent research findings about the role of martial arts training on practitioners outside of Ethiopia. The second gap, to my knowledge, is the absence of martial arts related studies in Ethiopia.

Studies regarding the effects of the martial arts began to emerge around the 1960s in the behavioral sciences and expanded especially after the mid of 1990s (Vertonghen & Theeboom, 2010). Two recent literature reviews regarding the psychosocial impact of martial arts practice on practitioners, Binder (2007) and Vertonghen and Theeboom (2010), found out that findings of such studies are inconsistent. Their findings showed that while most of the researches found evidences of positive effects of such trainings, some researches (especially recent ones) found evidences of no and negative effects.

The positive effects of the martial arts found by different studies can be broadly classified as physical benefits and psychosocial benefits. In the case of physical benefits, it was found that martial arts/TKD improved: flexibility, explosive power, and strength of boys in Yavatmal City of Hong Kong (Khan & Joshi, 2011); sensory organization and balance of children with developmental coordination disorder, in Hong Kong (Fong et al., 2011a); adolescents' development of postural control and vestibular function, in Hong Kong (Fong, et al. 2011b); and health-related quality of life, in Germany (Draxler et al., 2010). In the case of psychosocial benefits, the positive outcomes of martial arts/TKD include: lower verbal aggression and hostility and higher personal growth and self-acceptance of adolescents, in South Africa (Steyn & Roux, 2009); greater improvements in cognitive self-regulation, affective self-regulation, prosocial behavior, classroom conduct, and performance on a mental math test, in USA (Lakes &

Hoyt, 2004); self-reliance and enthusiastic optimism of boys, in USA (Kurian et al., 1994); less participation of adolescents in risk behavior (Goldsmith, 2013); improved social dysfunction of children with autism spectrum disorder, in Iran (Movahedi et al., 2013); and improvement of juvenile delinquents on resistance to rules, impulsiveness, and inappropriate social behavior (Zivin et al., 2001).

On the contrary, other studies reported no or negative impact of the martial arts on practitioners. Findings of no effect of the martial arts include: no relationship between five-week training and measures of psychopathology and self-esteem, in USA (Yong, 2005); no relationship between three clusters of variables, i.e., length of training, level of dedication, and the predicted variables (aggression, assertion, introspection, and respect), in USA (Kellogg, 2003); and no significant difference in children's behavior as a result of martial arts therapy, in USA (Esterman, 2012). The negative effect of the martial arts is also reported by other studies: increased youth anti-social behavior, in Norway (Endresen & Olweus, 2005, cited in Vertonghen & Theeboom, 2010); more health concerns among black belts, in USA (Wargo et al., 2007); and higher anger rate in adolescents, in Iran (Lotfian et al., 2011). There are also other studies that reported injury related problems (see Landa, 2004; Pieter, 2005; Zetaruk et al., 2004; Kazemi et al., 2009) and unhealthy weight management of athletes (see Kazemi et al., 2011).

There are also two researches that showed even participating in different types of the same martial arts (i.e., modern and traditional) can result in different outcomes. The traditional martial arts are found to have positive effect while the modern ones have the opposite (see Trulson, 1986, who studied the issue in relation to juvenile delinquency, in USA and Nosanchuk & MacNeil, 1989, who studied the issue in light of aggressiveness and belt level, in Canada).

As it can be noticed from the above paragraphs, there are many studies that are concerned with the martial arts and their effects on practitioners. However, none of the studies I have found is done in our country, Ethiopia. I searched for research papers done in Ethiopia on this issue - on the internet, at AAU's graduate library, and at AAU's Electronics Library. I also asked people who are knowledgeable about the martial arts. Yet, I have not found any study that is concerned with martial arts, in Ethiopia.

Therefore, I claim that there are two major knowledge gaps in this area of research that should be filled by researches like this. This current study took the initiative to attempt to contribute in filling the knowledge gaps discussed above by researching the role of TKD training on the well-being of adolescents in Addis Ababa city. In so doing, the study made efforts to answer the following research questions.

Research Questions and Hypothesis

- What is the nature of taekwondo (TKD) training which the taekwondo adolescents have been receiving?
- What are the benefits of taekwondo training for the well-being of adolescents?
- What problems are there in relation to taekwondo training and taekwondo adolescents' well-being?
- What is taekwondo adolescents' level of subjective well-being (SWB), in Addis Ababa?
- Is there a statistically significant difference in subjective well-being between taekwondo adolescents with different belt rankings?

Hypothesis: There is a statistically significant difference in subjective well-being between taekwondo adolescents with different belt rankings (lower level belts, middle level belts, and higher level belts).

1.3. Objective of the Study

1.3.1. General Objective

The overall objective of this study was to investigate the role of taekwondo training on the well-being of adolescent practitioners of taekwondo in Addis Ababa city.

1.3.2. Specific Objectives

- To describe the nature of taekwondo training which the taekwondo adolescents have been receiving.
- To explore the benefits of taekwondo for the well-being of adolescents.
- To identify problems on taekwondo adolescents' well-being as a result of taekwondo training.
- To determine taekwondo adolescents' level of subjective well-being, in Addis Ababa City.
- To compare taekwondo adolescents with different belt rankings based on their levels of subjective well-being.

1.4. Rationale and Significance of the Study

1.4.1. Rationale of the Study

There are three rationales of this study: my personal interest, social work's need, and the gap in the study of martial arts in Ethiopia. First of all, it has always been my interest to engage in martial arts since I was a child and to research about it since I was an undergraduate student at Jimma University. Currently, I am a MSW student at AAU and I am also practicing TKD. In addition, I had some training in another type of martial art called Kung Fu. I have practiced these martial arts in three different clubs, one kung fu and two TKD clubs. While practicing at these clubs, I always noticed that many of the practitioners were adolescents. Then, given my

background in sociology and social work (children, family, and youth concentration), I always wondered what the role of such training on adolescents could be.

The second rationale is in relation to the need of social work. Social work is a profession that dedicates itself for the well-being of human beings. It tries, among other things, to promote the positive functioning of people and their social organizations. And, it is obvious that one of the most important concerns of social work is the well-being of adolescents. Whatever adolescents engage in and whatever that might affect them is of great interest for social work practitioners, researchers, educators, advocates, and students. Therefore, studying the role of TKD training is essential for the social work profession. Thirdly, though many of the participants in martial arts training in Ethiopia are adolescents and participating in such trainings can have impacts on them, the effect of such trainings on adolescents and their well-being has not been studied in our country. Therefore, studying this issue in Addis Ababa is very important to fill the knowledge gap.

1.4.2. Significance of the Study

I believe that this study will have significance in four interrelated spheres of social work, i.e., social work education, research, practice, and policy. It is frequently said that social work emphasize more on practice than knowledge production, compared to other social sciences like sociology and psychology. This holds true when it comes to especially the sphere of martial arts and its role. Therefore, this study will have significance in terms of contributing for social work's knowledge production. This study also contributes to researchers because it took the initiative to study the issue of martial arts and adolescents' well-being. In so doing, it highlighted the knowledge gaps in this area of study; its findings pinpointed potential directions for future

research; and it may motivate researchers to test the finding of this study or other related hypotheses.

This study also has significance for social work practitioners. First of all, knowing what is happening to adolescents as a result of practicing TKD makes practitioners insightful; it will enable them to understand such adolescents while working with them. In addition, based on the positive findings of this study, practitioners may consider using such training for the purpose of interventions. Finally, policy makers and advocates that are concerned with adolescent well-being will gain insight, from this study, about the situation and do their job accordingly. In general, therefore, studying this issue and knowing its role is very important for the profession of social work in its effort to promote the wellbeing of adolescents.

1.5. Scope of the Study

This study was delimited to studying the role of World TKD (as opposed to International TKD) training on the well-being of adolescent practitioners in Addis Ababa city.

Though there are many forms of martial arts in Ethiopia, in this study, only one type of martial arts, i.e., World TKD was studied. This is because of four important reasons: for the sake of manageability; my personal experience in or familiarity with World TKD that could help me have more insight into the overall situation; the popularity of World TKD in Ethiopia which enabled me to have sufficient participants; the willingness of different TKD federations in Ethiopia to collaborate in this study. Here, it is important to note that TKD itself is divided into two major camps worldwide and in Ethiopia, i.e., WTF and ITF. Though both federations in Ethiopia showed their willingness to collaborate in this study, only World TKD is included in this study because it is an Olympic sport and it has only one federation at international and national levels (unlike International TKD which has a number of federations claiming to be true

representatives of the martial art). Note that in this paper the term *World TKD* is represented by TKD.

Even though practitioners of world TKD are diverse and of different age groups, in this study, only adolescents aged 12-18 years were studied. This is because: many practitioners of TKD are adolescents; my concentration field in social work is about adolescents; and adolescence is a stage of development featured by multifaceted changes and associated problems.

Finally, this study is geographically delimited to Addis Ababa city instead of the whole country. This happens as a result of financial and time constraints and for the sake of manageability.

countries (such as France, the Netherlands, Canada, Finland, Australia and Belgium), martial arts are among the 10 mostly exercised sports by children and adolescents. In addition, martial arts are placed in the category of the 10 mostly exercised sports in a club setting. This situation, according to Skidmore (n.d.), has led to the establishment of numerous amateur and professional and national and international martial art associations/federations (e.g., WTF) which stage local, regional, national, and international competitions. This situation also holds true for martial arts practiced in Ethiopia. In Ethiopia, most frequently observed martial arts are World TKD, International TKD, Karate, and Kung Fu. All have their own federations/ associations at national and local levels and hold various competitions and demonstrations.

2.1.2. Classification of the Martial Arts

There are more than 100 various styles of martial arts in the world and the most popular ones are of Asian origin, i.e., Judo, Aikido, Karate, Kung Fu, and TKD (Lewis, 1996). There have been different forms of categorization of these martial arts. Green (2001) asserts that the frequently used classifications of the martial arts are based on the development and conception of martial arts in Japan. In Japan the term *Bugei* refers to the overall name of the martial arts, or more precisely, *Bugei* means “martial methods”. *Bugei* can be further divided into two categories, i.e., *Bujutsu* and *Budo*. *Bujutsu* means the “warrior’s technique or skill” (*Bu* stands for “warrior” and *Jutsu* stands for “technique” or “skill”. On the other hand, *Budo* means the “warrior’s way” (*Bu* stands for “warrior” and *Do* means “way”). Martial arts in the category of “Bujutsu” are the ones which maintained the original purpose of the martial arts, i.e., combat or fight. Examples of these martial arts include: Kenjutsu, Jujutsu, Ninjutsu, and etc. Martial arts in the category of “Budo” are developed out of the original forms of “Bujutsu.” Some examples of these martial arts include: Kendo, Aikido, Judo, TKD, and etc. The ultimate intention of these

martial arts is not combat, but the development of the self in terms of its different dimensions, i.e., physical, mental, and spiritual.

Another way of classifying the martial arts is as modern/sport and traditional martial arts. While the modern martial arts stress combat, competition, and the physical dimension of the art, traditional martial arts stress the opposite, i.e., philosophy and tradition, respect, meditation, self-control, pattern practice/*Kata*, non-aggression, and etc. These traditional martial arts are based on ideas from the Asian philosophies/religions. Nowadays, it is common to observe that different martial arts have both traditional and modern versions, for example, TKD and Kung Fu (Greenwood, 2009; Kellogg, 2003; Nosanchuk & MacNeil, 1989; Trulson, 1986; Vertonghen & Vertonghen, 2010; Zivin, et al, 2001).

Martial Arts can also be classified as internal/soft and external/hard martial arts. The internal/soft martial arts are concerned with training the mind and developing the practitioner's energy or internal power ("Chi" or "Ki", in Chinese or Japan, respectively). In addition, these martial arts emphasize force-redirecting movements or techniques of defeating the challenger (using his/her own force against him/her). Some examples of this form of martial art include T'ai Chi chuan, Pa-kua, and Hsing-i (which are part of the Chinese Kung Fu) and Aikido (which is a Japanese martial art developed out of the Samurai's martial art of Jiu-jutsu) (Kellogg, 2003; Lewis, 1996; Skidmore, n.d). The external martial arts like Shaolin Kung Fu, Karate, and TKD focus more on the physical strength and its power, hand and body conditioning, strikes, and force-to-force techniques. This makes the external/hard martial arts more of aggressive instead of being defensive and passive (Kellogg, 2003; Lewis, 1996; Skidmore, n.d).

Martial arts can also be classified as more comprehensive and less comprehensive. Two best examples of this classification could be the two Korean martial arts called Hapkido and

TKD. While Hapkido is the more comprehensive one (because it includes techniques that are found in both the hard and soft martial arts), TKD is one of the less comprehensive martial arts (since it primarily focus on force-to-force or aggressive counterattacking techniques) (Kellogg, 2003). It is also important to note that we may classify martial arts based on their use of weapon. There are martial arts which are based on solely weapon (e.g., Fencing, Kendo, etc); which are weaponless (e.g., TKD, Karate etc); and which combine weapons with the body (e.g., Kung Fu, Aikido, etc) (Green, 2001; Lewis, 1996).

2.1.3. Martial Arts and Philosophies Associated with them

The contribution of Asian religions and their temples/monasteries to the emergence of oriental martial arts is usually controversial. It is frequently said that Asian martial Arts originated especially in the Chinese Buddhist monastery called Shaolin and spread all over the world. In this case, Lewis (1996) argues that the bases for the emergence, development, and spread of Asian martial arts are the religions of Taoism and Buddhism and their monks and priests. However, this account is not always accepted. For example, Henning (2011) asserts that martial arts originated not in monasteries and temples, but they were taken to the monasteries and temples by ordinary people from different walks of life including people who were in the military. In spite of this controversy, it is commonly agreed that different Asian philosophies and/or religions have contributed to the development of Asian martial arts. These philosophies/religions according to Lewis (1996) and Henning (2011) include Confucianism, Buddhism or Zen/Chan Buddhism, and Taoism/Daoism.

Confucianism, which is originated in China by the Chinese philosopher Confucius, is more of a philosophy than a religion. This philosophy emphasized doing the right thing, duty to parents, devotion to family tradition, and dedication to truth and idealism. Buddhism is of Indian

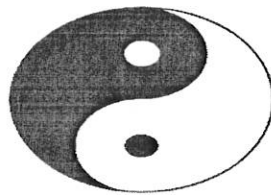
origin and introduced and spread to other parts of Asia including China, Japan, and Korea. However, the religion has lost much of its original form as it interacted with other religions and philosophies such as Confucianism and Taoism. One result of this interaction is the creation of Chan/Zen Buddhism (Lewis, 1996). Taoist philosophy and Zen Buddhism are the ones that are mostly linked to the martial arts. Both religions underline the harmony of body and mind to achieve salvation (Lewis, 1996). According to Henning (2011), while the Taoist temples are credited mainly for the development of the internal form of martial arts, Zen Buddhist monasteries are credited with the development of the hard form of martial arts.

Henning (2011) also underlines that that Taoist philosophy, which influenced both Confucian and Buddhist philosophy, is the basis of Asian martial arts' core philosophical conceptions. This core philosophical idea is based on how Taoists understand nature or the universe:

A fundamental teaching of the Taoist religion is that there is a natural harmony of all things, that everything in existence has its complementary opposite. These two opposing forces that flow into one another in a continuous state of change are known as Yin and Yang and they are represented by two symbols within a circle. Yin is the negative aspect of the universe and relates to female, night, cold, and it is seen as a black fish with a white eye in the circular diagram. Yang is the positive aspect of the universe, indicating the male, day, [and] warmth. It is represented as a white fish with a black eye. Neither can exist without the other. These two inseparable forces are, according to the Taoists, the principle of the universe. The complementary forces flow into one another. Night becomes day, summer becomes winter, hard becomes soft; the Yin becomes the Yang, continually pushing forwards and the Yang becomes Yin again. These two apparent

opposites were not viewed as permanent and irreconcilable, but constantly changing in a ceaseless rhythmic cycle. Understanding this interchange of Yin and Yang is perhaps the most important single aspect in the learning of a Kung Fu system [and other Asian martial arts like TKD] (Lewis, 1996, pp.73-74).

Figure 1: The Yin and Yang Symbol



Source: U Turn Crossfit (<http://uturncrossfit.com/?p=3365>)

Zen Buddhism is a Chinese form of Buddhism which includes ideas from both the Confucian and Taoist philosophies. From Confucianism it included the emphasis on rituals and from Taoism it included rhythm, movement, or music. In Zen Buddhism, martial art practice is considered as a form of meditation or a way of practicing the Zen (no-mindedness). This is done mainly using pattern/*kata* trainings. These dance-like, pre-arranged movements of combat enable the practitioner to practice his/her particular martial art and fight in combats without being conscious of his/her actions or without having aggressive feelings. This means that a person can meditate while he/she is practicing the pattern/*kata*. In other word, in this philosophy, it is believed that physical activity can free the mind and both the body and the mind of the practitioner can be developed simultaneously (Nosanchuk & MacNeil, 1989; Skidmore, n.d.). It is underlined that enlightenment is achieved using the body as an instrument (Cynarski, et al., 2011). The idea of mind-body or spiritual development via physical activity is best indicated in the Japanese concept of *Budo* which is translated as the warrior's way. And this philosophical

orientation of the martial arts is especially evident in the traditional forms of martial arts whose names end with the suffix *do*, for example, TKD, Karate-do, judo, aikido, etc (Mainland, 2010).

2.1.4. Taekwondo

2.1.4.1. What is taekwondo?

TKD is traditional and ancient Korean martial art that existed for some 2000 years. TKD is also the national sport of South Korea and in its modern form it is an international Olympic sport. Though TKD is a native Korean martial art, it has been influenced by the Japanese martial art of Karate and the Chinese Kung Fu. Literally, the word TKD can easily be understood by identifying or isolating its constituent words, i.e., *Tae*, *Kwon*, and *Do*. *Tae* means “to kick” using the feet; *Kwon* means “to punch” using fists or hands; and *Do* means “way” or “method” or “art” or “discipline.” Therefore, literally, TKD can be defined as the way or art of kicking and punching or more broadly, as a way of unarmed combat using the body. Nevertheless, as it is the case in other oriental martial arts, TKD is beyond combat and fighting techniques – it is a way of life; way of thinking; unit of mind, body and life; development of moral character; and etc. In TKD the ultimate aim is developing the TKD spirit and applying it to other aspects of one’s life. The TKD spirit is developed via rigorous physical training that leads to physical, mental, and spiritual development. In TKD it is believed that practicing TKD requires a synchronization of physical movements with one’s mind which should be peaceful. This idea of unity of body and mind is extended to the unity and harmony of life in a society that leads to lasting peace (Khan & Joshi, 2011, Morris, 1994; Park, et al., 2009; Tausk, 2001; World TKD Federation, n.d.).

2.1.4.2. History and development of taekwondo.

The history and early development of TKD is related with the military. The earliest form of TKD is called *Taek Kyon* and it was borne in Korea during around 50 B.C., in Koguryo

kingdom, which was one of the then three kingdoms of Korea. However, the development and spread of this martial art was made possible by the warrior class of the Silla kingdom called the Hwarang. During that time, the Silla kingdom, which was the smallest and least civilized of all, was frequently troubled by pirates from the neighboring Japan. Because of this, its leaders asked for help from the Koguryo kingdom which was stronger at that time. Accordingly, the Koguryo kingdom sent soldiers to provide help. The Koguryo soldiers also trained the military of the Silla kingdom in Taek Kyon. Those soldiers of Silla trained in Taek Kyon are called the Hwarang and they were recruited from the families of nobilities and they created the society of Hwarang-Do, which means “the way of flowering manhood”. These young men received education and training not only in Taek Kyon but also in history, Confucian philosophy, ethics, Buddhist morality, riding, archery, sword play, and military tactics. The Hwarangs had also five ethical principles that are based on ideas from Buddhism. These principles guided their lives and actions and laid the foundation for the 11 ethical principles of the current day TKD. These five principles are: be loyal to your country; be obedient to your parents; be trustworthy to your friends; never retreat in battle; and never make an unjust kill (Park, et al., 2009).

Taek Kyon has passed through significant transformations over the following years. At different times, the primary use of Taek Kyon oscillated between being a military art to being a sport and recreational activity. Its name had also been changed to Subak in the 12th century. In addition, after the 14th century, Taek Kyon/Subak was largely practiced by the general public, too (Park, et al., 2009). The existence and development of this martial art was also threatened at times. The initial challenge appeared during the second half of the Yi dynasty that lasted from 1397 to 1907. As a result of a socio-cultural change characterized by emphasis not on military arts but on scholarly pursuits, this martial art had almost disappeared. Another huge challenge to

the existence and development of this Korean martial art came during 1909 when Japan invaded Korea and colonized it till 1945. However, paradoxically, this challenge helped to revive this martial art. During their colonization of Korea, the Japanese prohibited the practice of Korean Martial arts. This resulted in patriotic desire among the population to practice the native martial arts in secret, in remote places like Buddhist temples. Other people also migrated to China and Japan and learned the martial arts of these countries. Up on the liberation of Korea in 1945, the practice of the native martial arts continued officially and many schools were opened to teach the martial art. However, at this time, the Korean native martial art was influenced and modified by the different forms of Japanese martial arts (like Karate) and Chinese Kung Fu systems. And, this resulted in variation in teaching of this martial art at different schools. In addition, starting from 1946 Taek Kyon was taught to some segments of the military (Park, et al., 2009; Tausk, 2001).

The most significant and decisive moment in the development of Korean martial arts occurred during the Korean War in 1950s, following the independence of the country. In 1952, different masters of the Korean martial art presented a demonstration in front of the then president of South Korea, President Syngman Rhee. Soon after watching this demonstration, the president ordered that this martial art should be taught to all soldiers in the military. This also led to expand efforts to unite the different schools of this martial art (Park, et al., 2009; Tausk, 2001). In addition, in 1955, this martial art was taken to the general population by General Choi Hong-Hi, who is now called the “father of modern TKD.” Besides, General Choi and his fellow masters united the different schools of this martial art (except for schools known as Tang Soo Do and Hapkido) and called it TKD. In his effort to do so, General Choi also added some of the *kata*/patterns practices of Karate to TKD (Tausk, 2001). In 1962, the Korean TKD Association

(KTA) was formed and General Choi became the first president. Later, in 1966, General Choi established the International TKD Federation (ITF). After some time, he resigned his position in the KTA and took the head-quarter of ITF to Canada (Morris, 1994). The reason for this, according to Burdick (2001), is a disagreement between the general and the then president of the country, President Park. General Choi considered TKD as a self-defense art rather than a sport (Morris, 1994).

During and after the unification of the different schools, TKD was being introduced to the rest of the world in different ways. It also gained huge popularity within a short time. The first responsible situation for this is the Korean War. According to Tausk (2001), this war enabled some American soldiers to study TKD in Korea and open their own TKD schools in America. The first school of TKD in America was opened in 1956. Another responsible situation for this, according to Park, et al., is the effort of the founding masters of modern TKD to spread it all over the world. Accordingly, in 1960s, they sent demonstration teams to perform TKD in different countries. And this demonstration was followed by different countries request for TKD instructors to come to their countries and teach TKD (2009). The other opportunity for the expansion of TKD was the Vietnam War. During the war, the South Vietnam Government requested instructors of TKD from Korea to train its military (Park, et al., 2009). In addition to this, American soldiers who were fighting in Vietnam had the chance to learn TKD and take their skills back to their home country. This highly contributed for the vast expansion of this martial art in 1970s (Tausk, 2001).

Another turning point in the history of TKD occurred in 1972 and 1973. In 1972, in South Korea, TKD was made part of the curricula at primary schools, middle schools, high schools, and college level education (Burdick, 2001). In 1973, the then president of KTA

claimed that the head-quarter of TKD should be in South Korea since Korea is the birth place of TKD and he announced that ITF no longer represented TKD in the World. Therefore, the new World TKD Federation (WTF) was established in 1973 to organize national federations of TKD worldwide (Morris, 1994). Because of this TKD is currently divided into two major camps, i.e., ITF and WTF. However, according to Park, et al., (2009), only WTF is accepted by the South Korean government as legally responsible organization to coordinate TKD worldwide.

Here, it is important to note that the situation of TKD in North Korea is not well known because of the secretive nature of the government. The main thing known about the situation of TKD in this country is that its people practice TKD (Tausk, 2001). It is also known that in 1980s, General Choi went to North Korea and taught TKD. After this the North Korean government started to claim that ITF functioned under its support (Burdick, 2001).

Following the establishment of WTF, TKD became more inclined to being a competition or sport martial art than being exclusively a self-defense martial art. As a result of this and because of its increasing popularity, in 1988's Olympics, in South Korea, world TKD was included as a demonstration sport and this exposed the world to the unique features of this martial art. Because of this, TKD was again included as a demonstration sport in the 1992's Olympics, which was held in Barcelona, Spain. Following this, in 1994, it was decided that TKD should be in the Olympics as a full medal sport. Starting from the 2000's Olympic which was held in Sydney, Australia, TKD has been in the Olympics as a full medal sport (Park, et al. 2009).

There is also another most important factor that is responsible for TKD's popularity, i.e., its unique and powerful foot techniques or kicks that includes various kinds of jumping kicks (Skidmore, n.d; Park, et.al., 2009; Tausk, 2001). Because of its exotic kicks, according to Tausk,

TKD is the most frequently presented martial art in the movies and television productions (2001). The popularity of TKD continued worldwide and in 2013, WTF had 205 member nations including Ethiopia (WTF, n.d.). And TKD is practiced by more than 30 million people (Park et al., 2009). TKD is also popular among children and adolescents (Park et al. 2009). In relation to this, it is noted that TKD students begin their TKD career at early ages (TKD PW, 2009, cited in Fong et al, 2011b).

2.1.4.3. Aspects of the training of taekwondo.

TKD, like other martial arts, can be classified into two, i.e., traditional and modern/sport TKD. In both cases it can have different elements of training. Generally, the different aspects of its training include: techniques of TKD, form/pattern/kata trainings, sparring/fight training, self-defense trainings, breaking techniques, philosophy and ethical principles, warming up and stretching exercises, physical fitness exercises, meditation and breathing, and TKD competitions (Park, et al., 2009; Tausk, 2001; Trulson, 1986).

Techniques of taekwondo. The techniques that are found in the arsenal of TKD can be classified into four major groups. These groups are: kicking, punching, blocking, and stances. The first two groups are designed to exert powerful strikes in different directions and from different distances. However, much emphasis is given to the kicking aspect of the strike. The third group of the techniques is blocking. Different techniques of blockings are meant to protect different parts of the body from different forms of strikes that come from various directions. Finally, the most fundamental group of TKD techniques is stance. Appropriate stance is crucial for both striking and blocking techniques. Both strikes and blockings are expected to be effective in terms of being swift and powerful. Especially, the proper use of the hip and the waist are fundamental for powerful techniques of striking and blocking (Park, et al., 2009).

Compared with other martial arts, TKD is one of the martial arts that focus on striking (Tausk, 2001). However, it is distinguished from the other martial arts because of its heavy reliance on foot techniques or kicks. The rationale for this is that legs are more powerful and they can cover longer distance than any other part of the body. In addition, they help to maintain a safer distance from the opponent (Park, et al., 2009; Tausk, 2001). TKD is also unique for its fighting stance which is upright and mobile (Park, et al. 2009).

Pattern practices or forms (hyung or poomse, in Korean or kata in Japanese). Poomse is a dance-like pre-arranged movement of combat in which the practitioner combines all his/her kicking, punching, blocking, and other techniques to fight with imaginary enemy/enemies (Skidmore, n.d). It has already been discussed that pattern practices are highly emphasized in traditional schools of Asian martial arts. Park, et al. (2009) stated that TKD forms are central ways of learning the different techniques of the art by bringing together the different techniques of the art. In line with this, according to Friday (2001), forms are the fundamental pedagogical tools in traditional martial arts (including TKD) by which teachers teach and students learn and internalize their arts. Though they are not considered as central teaching methodology, forms are also present in modern martial arts to help assist free sparring which is their main teaching method.

Forms help practitioners to bring about coordination, balance, timing, breath control, rhythm, and focus. They are also important means of combining different techniques and mastering various sequences of combinations of techniques (Friday, 2001; Park, et al., 2009). Generally forms are practiced in two ways. One way, which is evident in TKD (and other Chinese, Korean, and Okinawan martial arts), is to practice it individually, without a partner or as a fight with imagined opponent/s. The other way, which is evident in Japanese martial arts, is

to practice it in pairs with a partner (Friday, 2001). In addition to being a teaching methodology, forms are also used in TKD as major assessment techniques to evaluate and promote a practitioner to the next rank (Park, et al., 2009).

The use of forms as a teaching methodology is based on ideas from Confucian philosophy which underscores the importance of the right ritual (“stylized action” or “sequentially structured experience”) to gain wisdom and understanding. The right ritual, in martial arts, means repeating the actions of the previous masters. This Confucian idea is also strengthened by the teaching of Zen-Buddhism: for effective learning to take place emphasis should be given to a student’s own and immediate experience instead of lecturing by a teacher. In both philosophies, it is underlined that the teacher is not a lecturer but a model and a guide (Friday, 2001). In relation to this, another most important aspect of this methodology is its emphasis on the repetition of the rituals/forms. This is because repeated practice leads to the internalization of the techniques and it enables automatic response or application of techniques in different combat situations (Park, et al., 2009).

Sparring. Sparring or fight trainings are the major teaching methods in modern TKD and other modern martial arts (Friday, 2001). Sparring is also very helpful for practitioners to examine their skills in fighting. In spite of this, there has been a great concern with regard to its applicability. On one hand, it is desirable to make the sparring as much similar as real-life fight, so that it can be a more effective method of training for real-life encounters. On the other hand, making this training resemble a real-life fight will inevitably result in serious injuries and even death of the trainees. Some schools of martial arts allow such unrestricted sparring (Park, et al., 2009).

However, other schools, to deal with this problem, came up with two major approaches. One approach is called focus/non-contact sparring. In this approach of sparring, fight trainings and scoring in fight competitions are done without actually hitting the partner/opponent, but by pointing the strike one inch away from the target. Though this approach avoids harm to participants, it is criticized as ineffective method of training for real-life fight. The second approach, which is followed by TKD, takes a middle ground. Here, sparring is done with contact but the contact is restricted in two major ways. In TKD sparring, players are expected to wear different body protectors including: headgear, mouth protector, chest protector, and forearm and shin pads. In addition, strikes are allowed only to the upper part of the front body. This kind of sparring is the best way of sparring since it prevents serious injuries while allowing for real-life-like fight (Park, et al., 2009).

Self-defense. Self-defense trainings are drills that are designed to prepare students for specific type of reactions in specific type of real-life or street attacks. According to Park, et al. (2009), the concept of self-defense in TKD is beyond learning or having various techniques of dealing with various attacks, but it is mainly a matter of having the TKD spirit. In addition, anything taught in TKD enables students to defend themselves and to develop their TKD spirit.

The student of Tae Kwon Do gradually develops a sense of inner harmony and discipline that prevents panicking in a dangerous situation. This inner peace comes from the understanding that he is not helpless. His training in Tae Kwon Do has shown him over the years that he is capable of feats of agility and skill that he wouldn't have thought himself capable of before his training. He has learned himself and learned his limits. This spirit should help him to avoid a confrontation. By not allowing the bully to intimidate

him, the student is able to avoid a violent confrontation. This is the heart of the teachings of Tae Kwon Do (p. 159).

Park, et al. (2009), underline that there are some situation in which a student cannot avoid confrontation because the attacker insists on attacking. In this case, students are advised to avoid the situation/attacker (e.g., by running away, giving away their money, etc). And, if this does not work, as a last resort, students apply their TKD skill in order not to be harmed by the aggressor/s.

Breaking. Breaking is one aspect of TKD practice in which practitioners use their body (particularly hands and feet) to break wood and brick (Park, et al. 2009). Advanced level practitioners also break concretes (Tausk, 2001). Compared to other aspects of TKD training, breaking is less emphasized in day-to-day trainings. But, it is a major ingredient in the case of demonstrations (public exhibitions) and promotional tests. In these two cases, breaking helps to show the student's ability to focus his/her physical and mental powers at a particular spot. In breaking, it is also noted that what enables the practitioners to do those unbelievable breakings without being injured is not merely physical strength, but the ability to focus; the ability to have a unity of body and mind (Park, et al. 2009). A student of TKD is expected to be able to break a board using all the techniques of his/her level. In addition, as a student is advanced in the rank of TKD, he/she should be able to perform breakings with advanced techniques (Tausk, 2001).

The philosophy and ethics of taekwondo. It has already been discussed that TKD, like other major oriental martial arts, has been influenced by major religions/philosophies of Asia, such as Taoism, Buddhism/Zen Buddhism, and Confucianism. According to Park, et al. (2009), TKD is beyond a mere training of combat techniques, but rather a life-style which is based on the development of the TKD spirit and its application in everyday life. This essence of TKD is also

indicated by the name of the art itself. The word *do*, which is at the end of the name, means “way” in Korean and it connotes that the art is a way of life.

The underlying philosophical emphasis of TKD is not different from the other martial arts. According to Park, et al. (2009), at the heart of the TKD spirit is a belief that there is constant interaction between nature and oneself and this interaction must be harmonious for peaceful existence. This also shows that this philosophy assumes the unity of things in the universe. As a result, it's the major goal in TKD is to control the ego (discriminating mind, as Zen Buddhists call it). In addition to this:

At the core of this philosophy is the concept of ‘duality’ in nature. Duality refers to the interaction of opposing forces. Harmony is achieved when opposite forces are distributed equally, resulting in balance. When one force dominates however, discord is the result. For example, when an adversary uses positive (aggressive) energy, or in other words initiates an attack, the defender should use negative (yielding) energy to respond, by stepping aside to allow the energy of that attack to flow past harmlessly. In this manner, what was once hard (the assailant's attack) becomes soft (non injurious), and what was soft (the defender's passivity) becomes hard (an effective way to counter a potentially dangerous assault), allowing balance to return (Park et al., 2009, p. 175).

In TKD, it is believed that the ultimate benefit of the TKD spirit and its assumption is that it makes the practitioner capable of leading peaceful life by living in the “now” and by harmonizing one's action with nature (Park, et al., 2009).

The TKD spirit is also evident in TKD's modern-day ethical principles that are derivative of the five ethical codes of the ancient military class of Korea, the *Hwarangs*. These five principles are: be loyal to your country; be obedient to your parents; be trustworthy to your

friends; never retreat in battle; and never make an unjust kill. The ethical principles of the current TKD are 11 and they are supposed to shape the moral development of practitioners. These ethical principles include: loyalty to your country; respect your parents; faithfulness to your spouse; respect your brothers and sisters; loyalty to your friends; respect your elders; respect your teachers; never take life unjustly; indomitable spirit; loyalty to your school; and finish what you begin. These eleven commandments may be summarized by what is known as the central tenets of TKD: loyalty, respect, courtesy, perseverance, and justice (Park, et al., 2009).

In addition to the above general ethical principles to guide the life of the practitioner, TKD, has specific codes of conduct to guide interaction within the TKD community. Park, et al. (2009) discussed these codes in detail and some of these codes of conduct as listed by them are presented below in a table.

Table 1: Some of the Codes of Conduct in the TKD Community

Rules	Description
Angle and Posture of TKD:	-When you bow, you must be in a position of attention with your head bent at 45 degrees and your back at 15 degrees. You must bring the heels of your feet together vigorously.
When Sitting in the School:	-When a superior sits, you must kneel down and bow. -When a superior enters the school, you must get up from your seat and greet him or her; only after the superior sits down, can you kneel down and bow.
At School:	-When you enter the school, you must bow to the flag, to the school president, teacher, and to all other higher-ranking black belts. -There should be an absence of unnecessary conversation in the school; students should be dignified and reverent within the school. -The uniform must always be kept with care. -Except on special occasions, you must refrain from wearing your uniform when coming to or going from the school. -You must use honorific words (sir or mam) when speaking to the president, teacher, or higher-ranking black belts, regardless of their age within the school. -The president, teacher, higher-ranking black belts, or black belts are permitted to speak in non-honorific terms, regardless of age. -When not wearing your uniform, you must always respect and obey persons who are five or more years older than you.

Wearing the Uniform and Taking Care of It:	-The uniform must be kept clean, and you must be neatly dressed. -When your uniform becomes disheveled during practice or a game, you must fix it only after stopping your action and while turned away from all others.
In Society and at Home:	-You must observe a respectful decorum and speak courteously in home, school, and society. -You must observe the proper decorum, keeping a respectful attitude toward your teachers, superior officers, colleagues, and juniors.
Conversation with Others:	-Concerning your posture, when you sit and talk with other persons, you must face them with a courteous attitude and an open chest. -The conversation must be executed with a ready smile so as not to give the other person an unpleasant feeling. The conversation must be executed in a low voice, calmly, and in consultation so that the other person can understand. -When having a conversation with another person, you must be careful not to spray saliva. -You must especially be careful about the other person's title or position. -After carefully listening to the other person, you must express your opinion and contention based on true and accurate judgment. -You must not interrupt another person who is speaking. -You must not stare at another person with a hateful attitude. -When you have a conversation with a superior, you must not touch his body.
Dress and Appearance:	-Dress must be neat. -You must be formally attired in a tournament, a judgment, or at other events and ceremonies. -Hair must be neatly combed. -You must get used to leading a neat and clean life. -You must not show laziness in your appearance or attire.
Attitude of Leaders (President and Teacher)	-The president or teacher must have an exemplary personality so that he can be respected by his students. -The president or teacher must be especially careful because the students will follow the example of each and every one of his words and deeds. -Leaders must not slander or defame their companions or superiors in front of their students. -Leaders must refrain from using ugly words or practicing ugly deeds before their students. -The president and teacher must have a definite attitude. -They must not tell lies or use tricks. -They must not talk a lot before their students. -They must carefully consider the family circumstances and difficulties of their students, and must sincerely help them. -They must have a counseling rather than an ordering attitude.

	-They must correctly distinguish between public and private matters. -The president and teacher must avoid luxury, vanity, excessive merrymaking, gambling, excessive drinking, and must show their diligence and frugal life to their students. -The president and teacher must take the initiative in the development of the community and must practice what they preach. -The president and teacher, higher-ranking black belts, black belts, and all TKD practitioners must have an educating and sincere attitude by which they can display a moral spirit, practice justice, righteousness, and humility, and abandon the bad in their life.
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Competitions in taekwondo. There are two major types of competitions in TKD, i.e., pattern/form (*hyung* or *poomse*, in Korean) competition and fight (*Kyorugi*, in Korean) competition. In form competition, points are awarded by judges based on the quality of one's performance - stances, strikes, blockings, focus, and etc. Nevertheless, form competition is not usually emphasized in world TKD. On the contrary, fight competitions are dominant (Tausk, 2001). Fight competitions are always staged at international, continental, regional, national, and local levels (Park, et al., 2009; Tausk, 2001; WTF, 2007, cited in Chiodo et al., 2009). In addition, such competitions are included in different sporting events, for example, Pan American Games, Asian Games, African Games, Central American and Caribbean Games, Bolivarian Games, Southeast Asian Games, South American Games, South Pacific Games, and Olympic Games (Park, et al., 2009).

Sparring competitions are held by matching competitors on the criteria of gender, age, belt level, and weight category (WTF, 2007, cited in Chiodo et al., 2009). The age category includes children as young as 6 years old and there are two major divisions, i.e., senior divisions (age 18 and above) and junior divisions (black belt: ages 14–17, color belts: ages 16–17, color belts: ages 14–15, black belt and color belts: ages 12–13; black belts and color belts: ages 10–11, black belt and color belts: ages 8–9, and black belt and color belts: ages 6–7). Weight categories

differ based on age and gender of the players; the weight requirements for children and female competitors are lower compared to the male's (Park, et al., 2009).

Though there are different TKD organizations and rules of fight competition, many similarities are exhibited among them (Tausk, 2001). For example, in all most all cases players must wear protective pads which include headgear (protecting the head not the face); chest protector (protecting sternum, stomach, solar plexus, and ribs); groin protector; mouth protector; and forearm and shin pads (Park, et al., 2009; Tausk, 2001). Another similarity is that in TKD competition all strikes should be targeted at and above the waist. Both foot (kick) and hand techniques are available, but kicks are emphasized. A player can execute any kind of kicks as long as it is targeted above the opponent's waist. Kicks that are targeted at the head and that include jumping are also valued. Hand techniques, however, are only limited to punching to the chest. In both cases, a player's strikes are evaluated based on the impact they made on the opponent (Chiodo et al., 2009; Park, et al., 2009; Tausk, 2001). Because of the powerfulness of the kicks in TKD, knock outs and injuries occur in spite of all the heavy protections provided (Tausk, 2001).

Duration of fight competition may vary. But for Olympic-style competition, it takes three rounds, each round having three minutes and a one minute break between. The duration of competition could be reduced to two minutes of three rounds while having a one minute break between the rounds (WTF, n.d.). It is also observed that in TKD competitions, a player might fight in more than one game in a day, if he/she continues winning each subsequent fight (for qualifying, for semi-final, and for final matches) (Chiodo et al., 2009; Kazemi et al., 2011).

2.2. Adolescence

2.2.1. Defining Adolescence

Authors in the field of adolescent study commonly agree that defining adolescence is a difficult task and there is no one agreed-upon definition for it (APA, 2002; Moshman, 2005; UNICEF, 2011). One reason for this could be the possibility by which the term can be understood in terms of its different aspects, such as based on chronological development (age-wise), physical development, cognitive development, social development, and etc (APA, 2002). Another reason could be that different individuals experience it differently, for example, the inconsistent onset of puberty within and between the sexes. Third, different countries have different laws specifying, for example, who are considered adults and who are considered children. Finally, in spite of the presence of laws protecting children and adolescents from adult roles, many children are engaged in adult roles, including labor, marriage, primary caregiving and conflict (UNICEF, 2011).

Nevertheless, chronological definition could be the easiest way to define adolescence (Moshman, 2005). In this case, different authors and organizations propose different age ranges. For example, APA (2002), in its reference for professionals, provided the age range of 10-18. IWbG (2013) proposes the age range of adolescents to be 12-18. The UN provides the age range of 10-19 (UNICEF, 2011). Similarly, the Society for Research on Adolescence uses the age range of 10-19. Journal of Adolescent Research also specifies its own age range as 11-22. In spite of these different age ranges, we can still see commonalities in their definitions; adolescence is a stage of development which lies between but different from childhood and adulthood. Yet, distinguishing adolescents from adults might be more difficult than distinguishing them from children (Moshman, 2005). In this current study, the age range for

adolescents is determined to be 12-18 years as per the proposal of the IWbG which issued the PWI-SC (measure of SWB) used in this study.

2.2.2. Views toward Adolescents

In the world, there are some 1.2 billion adolescents (UNICEF, 2011, cited in MoFED & UNICEF in Ethiopia, 2012). And, 88% of them live in developing countries (UNICEF, 2011). Adolescents have been viewed both negatively (the deficit model) and positively.

Up until the mid of the 20th century, adolescents had largely been viewed in negative terms, as people characterized by storm and stress, wildness, irresponsibility, gang violence, alcohol-related accidents, school shooting, drug abuse, suicide risks, and etc. These negative images had been held not only by ordinary people and the media, but also by professionals, scientists, and researchers (APA, 2002; Lerner et al., 2006; Lerner et al., n.d.; Salkind, 2002; Susman & Rogol, 2004).

Among scientists and professionals, the negative view toward adolescents began with the work of the father of the study of adolescence, Granville Stanley Hall (1844-1924), whose 1904's book discussed the issue of adolescence in relation to psychology, physiology, anthropology, sociology, sex, crime, religion, and education (Lerner et al., 2006). In general, for Hall (1904), adolescence is a transitional stage of development that is best illustrated by human evolution. Adolescence is like that stage of evolution in which humans were evolving from being wild to being civilized. Therefore, this period is a period of "storm and Stress" by which individuals attempt to abandon their wild nature and become civilized. According to Lerner et al. (2006) and Lerner et al., (n.d.), Hall's legacy continued to influence other scientists and psychologists like Anna Freud (1969) who argued that adolescence is a universal stage of emotional and social developmental disturbance and Erik Erikson (1959) who claimed that this

stage is a stage of identity crisis. Based on this, other scientists and professionals continued to define adolescents as being at-risk people and tried to fix them.

The deficit view toward adolescents has recently been changed; the view toward adolescents has become mostly positive. Researches have showed that the negative things attributed to adolescents are not always biological and universal. Now, adolescence is seen as a stage of development in which biological, cognitive, emotional, and social changes occur and in which adolescents attempt to adjust themselves to these changes as per the societal expectations. However, though it is not universal, it is still believed that adolescents are more susceptible to particular problems (Susman & Rogol, 2004). Nevertheless, it is found that a large amount adolescents exhibit more of positive experiences such as success in school, good social relations, and adherence to social values instead of maladjustments and bad behaviors/habits like violence and drug abuse (APA, 2002; Lerner et al. 2006; Susman & Rogol, 2004; UNICEF, 2011). Therefore, it is believed that if adolescents get proper guidance and support from professionals and other adults, they can exhibit more positive outcomes (APA, 2002).

2.2.3. The Development of Adolescents and Associated Challenges

In human development or life cycle, there are stages where major changes occur. Next to infancy, adolescence is, perhaps, a stage of human development in which the most significant changes occur. The changes that occur during adolescence are multidimensional and interrelated. These changes can generally be classified as physical/biological, cognitive, emotional, social, and behavioral changes. The occurrence of all these changes, almost at the same time, requires adolescents to make adaptive adjustment/coping. While successful adjustment leads to wellbeing and better adult life, maladjustment does the opposite (APA, 2002; Archer, 2005; Moshman, 2005; Salkind, 2002; UNICEF, 2011).

Biological/physical changes. Biological/physical changes that occur during adolescents are multifaceted and interrelated. The beginning of all changes in adolescence might be linked to the onset of puberty. There is no exact time for the beginning of puberty; it has varied among individuals across time and societies and gender. It may also vary within the same place and historical time and gender. Some of the reasons for this variation may include: genetic and biological influences, stressful life events, socioeconomic status, nutrition and diet, amount of body fat, and the presence of a chronic illness. Generally speaking, people enter puberty at the age of 10-12 (in girls) and 12-14 (in boys) (APA, 2002). Puberty is a result of hormonal changes that occur in people during this age. The hormonal changes lead to the development of primary and secondary sexual characteristics, increased sexual drive, and capacity to fertility (Salkind, 2002). Primary sexual characteristics include, for example, growing breasts and menstruation (for girls), enlargement of the testes and ejaculating (for boys) and the development of sex organs (in general). Secondary sexual characteristics also includes, growing body hair at different parts of the body and changes in voice, among others (APA, 2002).

The hormonal changes and their byproduct biological/physical developments are associated with further changes in adolescence. According to (Salkind, 2002), change in hormones is sometimes associated with aggression, mood swings, and sexuality. APA (2002), also identifies the following as accompanying the hormonal and biological changes: concerns about body image or physical appearance (adolescents spend too much time in front of mirrors); weight gain (natural tendency at puberty) coupled with lack of physical activity leading to obesity; and eating disorders (anorexia and bulimia nervosa). These three body image-related concerns of adolescents are intertwined and usually evident among girls in developed countries where being slim is valued.

Change in cognition. The second aspect of adolescence development is change in cognition. During this stage, cognitive capacity is greatly improved. Cognitive changes are related with reasoning, problem solving, abstract thinking and reflecting, planning for future, and moral development. For example, adolescents are able to think in both hypothetical and real settings. They can also address different dimensions of a situations and cause and effects. Adolescents' ability to learn is expanded; they can attend to multiple topics and subject areas. They can apply lessons learned from one area into others. In the case of reflection, adolescents can be aware of their strengths and weaknesses. Because of these changes, adolescence is a time when self-concept and personal and social identity are developed. In addition, planning for the future (choice making about, for instance, education, recreation, occupation, and partner) and desire to understand others (e.g., friendship is mostly based on similarities) are common. Moral development is also evident at this stage. Moral development may include sense of values and ethical behavior, for example, moral reasoning, honesty, and prosocial behaviors (APA, 2002; Salkind, 2002). According to APA (2002), it is important to note that adolescents are not yet perfect in their cognitive capacities. And, therefore, adolescents need the guidance and help of adults. In addition, not all adolescents have the same capacity and pace of growth in their cognition.

Emotional development. The third category of adolescents' development is called emotional development. Emotional development is about having a normal sense of identity and the ability to deal with stress and emotions. Identity formation may not begin and end at adolescence, but people, for the first time, begin to contemplate about it at this stage. The concept of identity covers two things, i.e., self-concept (beliefs about oneself in relation to one's attributes, roles, goals, interests, values, and beliefs) and self-esteem (evaluating feelings about

one's self-concept, it could be global self-esteem/overall evaluation or specific self-esteem/about a particular aspect). Identity is also about the possible-self, i.e., what and who one will become in the future. The identity of an adolescent can be influenced by different factors such as cognitive capacity, physical changes, and other people's comments (APA, 2002). According to Erikson (1959), cited in Lerner et al. (2006), adolescence is a stage of identity crisis.

Adolescents are also expected to have some emotional intelligence/skills that could help them cope with stresses and manage their emotions in addition to making them have good relations with other people. Self-awareness and relationship skills are the two ingredients of emotional intelligence (APA, 2002). Yet, according to Freud (1969), cited in Lerner et al. (2006), adolescence is a time of emotional disturbance.

Social changes. The forth aspect of development in adolescence is associated with the social changes that occur during this stage. These changes could be understood in terms of peer and family relationship, school transition (APA, 2002; Salkind, 2002), dating and sexual behavior, work, and community (APA, 2002). While talking about social changes in adolescence, it is very important to note that most of the research findings are based on data from Western (white, middle class) adolescents. And adolescents from other cultures and social classes could be significantly different. Therefore, we need to be cautious when discussing this issue, in order not to generalize (APA, 2002 & Salkind, 2002).

During adolescence peer relations becomes more important for adolescents. Activities of adolescents become more peer focused (like sports and extracurricular activities) and are more important even than academic activities and activities with family members. Especially, during early adolescence, individual self-esteem is largely based on peer acceptance and confidence in physical appearance (Salkind, 2002). One possible reason for adolescents to be peer focused is

their desire for more independence from their families. This shift of focus is normal and parents and professionals should encourage positive peer relations among adolescents because peer groups have their functions. Peer groups could be reference point for one's identity formation; could make adolescents develop values and moral judgment; could be source of information; could be sources of popularity, status, prestige, etc; and could be reinforcers of behavior (APA, 2002).

During adolescence, the relationship between adolescents and their families changes. The interaction becomes less frequent. Adolescents desire for more independence and freedom increases, as a result of their physical change. And, this might lead to conflict between adolescents and their family since adolescents question family rules and roles (Salkind, 2002). Though there is less frequent interaction with families, family is still a significant part of adolescents' lives, as it protects them from bad behaviors and habits. Good parenting style (warm encouraging and involved parents providing guidelines and limits, having realistic expectation, and etc) is therefore essential for successful development of adolescents (APA, 2002).

Dating and sexual behavior is another aspect of the social development in adolescence. Dating may begin at 14 or 16 years. These days it may be done via the internet. Dating at this stage is more of short-term (for few months) and when it becomes longer the demand for sex could increase. Sexual activity at this stage could expose adolescents to sexually transmitted diseases like HIV/AIDS (APA, 2002).

School transition is also another important aspect of adolescents' development. Schools are important places in the lives of adolescents since they enable adolescents make friends, have attachments/ bonding and improve their cognitive capacities in addition to providing a sense of safety (APA, 2002). During adolescence, individuals move from one school level to another,

usually to different levels of high school. School transition might have negative effects on adolescents' functioning, for instance, on academic performance and psychological well-being (APA, 2002; Salkind, 2002). However, many of the adolescents could successfully cope and adjust themselves with it (APA, 2002).

Adolescents are also engaged in some sort of work; work is another aspect of their social development. Adolescents might have part time jobs, side by side with their education. Working can have both positive and negative impact on adolescents' well-being depending on mainly the amount of hours adolescents work. If the time of work is fair (< 20 hours/week), adolescents could get benefit from working, such as learning how businesses world work, having a sense of accomplishment, etc. On the contrary, too much hours of work (> 20 hours/week) could result in negative outcomes for adolescents such as work related injuries, problems in education, insufficient sleep, substance abuse, etc (APA, 2002).

Another aspect of adolescents' social development is seen in the case of community. The concept of community, in this case could include: socioeconomic characteristics of a neighborhood, availability of resource and services, faith institutions, the media, and people living in the neighborhood. All of these can have both positive and negative effects on adolescents' development. For example, good socioeconomic status and satiability of a neighborhood are supposed to have positive effects and vice versa. Faith institutions can provide adolescents with meaning, positive role models, moral teachings and etc. The media (music, TV, the internet, etc) could be positive or negative influences on adolescents depending on their content. They may teach adolescents important lesson or expose them to aggression, violence, sexual harassment, pornography, and etc (APA, 2002).

Salkind (2002) underscores the importance of understanding the changes and challenges of adolescence in different cultural contexts and how a particular challenge could be translated into a specific task. For example, in the case of adolescent-parent relationship, appropriate/normal adolescent development takes different forms in individualistic and collectivist societies. In individualistic societies what is valued during transition to adulthood is a tendency toward more independence from parents and more decision making power. On the contrary, in collectivist cultures, what is valued is more family responsibilities and greater participation in community decision making activities.

Behavioral change. Behavioral change, which is the result of the combined effect of physical, cognitive, emotional, and social changes, is the final aspect of adolescent development. During adolescence, it is normal to see experimenting and risks-taking behavioral tendencies among individuals. This situation can lead to both positive and negative outcomes among adolescents, depending on how it is handled by adolescents, parents, the community, and professionals. Realistic experimenting or risk taking helps adolescents to develop their identity, decision making skills, and assessment and reflections on situations (APA, 2002).

Nevertheless, adolescents usually make unrealistic experimenting/risk taking behaviors that endanger their well-being and the rate of risk-taking behavior is high among adolescents. Such risk-taking behaviors may involve cigarette smoking, alcohol use, use of other drugs (marijuana, cocaine, methamphetamines, and steroids), weapon carrying, fighting and sexual violence, sexual intercourse, pregnancy, unsafe abortion, school failure and dropping out, and failure to use motorcycle or bicycle helmets (APA, 2002; Compas, 2004; UNICEF, 2011). In relation to this, during adolescence, the rate of psychiatric/mental health problems (like

depression, conduct disorder, eating disorders, suicidal tendencies, etc) is increasingly high (Compas, 2004; UNICEF, 2011).

There are different explanations for why adolescents engage in such behaviors. Adolescents may do so for fun and excitement, for peer acceptance and status, by modeling and romanticizing (to identify with) adult behaviors, and for a variety of other reasons (APA, 2002) including socio-economic influences (UNICEF, 2011).

Given risk-taking behavior is natural among adolescents, adults and professionals can help adolescents avoid dangerous risk-taking behaviors and cultivate realistic experimentations. This can be done by assisting adolescents in their decision making and by encouraging them to participate in challenging but less dangerous activities (like sport, dance, theater, carpentry, hiking, part-time jobs, music etc) that fulfill their risk-taking urge (APA, 2002).

2.2.4. The Situation of Adolescents in Ethiopia

Ethiopia is a developing country which has a large amount of children and adolescents. The percentage of Ethiopian population below the age of 15 is estimated to be 47 and the percentage of adolescents (aged 10-19) is estimated to be 25 (DHS, 2012). And, some 85% of Ethiopian adolescents live in rural areas (UNICEF, 2011).

Ethiopian adolescents, like their counterparts in other developing countries, have been affected by multidimensional problems. These problems could include early marriage and sexual intercourse of girls (before the age of 18), educational disadvantages (especially for girls), gender discrimination, high risk of HIV/AIDS infection, domestic labor, high prevalence of female genital mutilation, sexual violence, orphanhood, and child/human trafficking (MoFED & UNICEF in Ethiopia, 2012 & UNICEF, 2011). In relation to this, according to DHS (2012), child labor is a great concern; 27% of Ethiopian children (aged 5-14) are child laborers. A large

number of children (150,000 - 200,000) live and work on the street in Ethiopia. Because of this, girls are more exposed to sexual abuse by adults, rape, unwanted pregnancy, early motherhood, and the risk of contracting HIV (UNICEF, 2011). Compared to urban youths/adolescents, rural youths have lesser opportunities to school, shorter stay in school, and early joining of the labor force (Comprehensive Youth and Workforce Development Assessment in Rural Ethiopia, 2012).

To deal with problems that affect adolescents and youth, the government of Ethiopia has taken different initiatives, including, among others, the formulation of the National Youth Policy (MYSC, 2004) and its rural and urban youth packages. In addition, the government, in its GTP (MoFED, 2010), recognizes the importance of giving attention for youth. Accordingly, youth centers are expanded (at *woreda* level) and different services and efforts (including reproductive health programs, recreational services, efforts to reduce and eliminate the use of harmful substances, and, etc) are proposed and implemented for youths (MoFED, 2010; MYSC, 2004).

However, these programs and services have limitations. According to UNICEF (2011), the services and programs fail to cover the most vulnerable segments of adolescents like rural youths, married girls, and out-of-school adolescents. UNICEF (2011) also advised that efforts to improve the well-being of adolescents should start by aiming to improve standard of living. The government of Ethiopia also seems to understand this situation. The GTP (MoFED, 2010) and the National Youth Policy (MYSC, 2004) have policy directions that emphasize making adolescents/youths participate and benefit from social and economic development in the context of democracy.

2.3. Well-being

2.3.1. Understanding Well-being

The concept of well-being, like that of martial arts and adolescence, has been controversial and difficult to define. One reason for this could be the multidimensional nature of the concept which covers physical, mental, social, material, and spiritual aspects. Another reason could be that different disciplines (like philosophy, psychology, sociology, economics, social policy, etc) and even different scholars within a single discipline define it differently. Nevertheless, all may agree that simply defined, well-being could mean ‘good life’. But, the difficult question is: what do we mean by ‘good life’? We could still conceptualize well-being or good life by identifying its different dimensions. In general, the concept of well-being could be classified into two broad categories, i.e., objective well-being and SWB (Camfield et al., 2008; CDC n.d.; Kobau et al., 2010; Schwannauer et al., 2013).

Objective well-being is about the presence of external factors (material and financial factors like housing and income) that are essential for one’s life. Indicators of objective well-being involve health status, employment status, educational attainment, and etc (Schwannauer et al., 2013). On the other hand, SWB is regarding people’s subjective perception and evaluation of their feelings (negative and positive affect) and evaluation of different aspects of their lives. Indicators of SWB could include feeling, experience, evaluation of life, and etc (Camfield et al., 2008; Schwannauer et al., 2013).

The non-objective aspect of well-being or SWB is somehow more complicated to discuss. Different authors classify it differently. Some authors (e.g., Ryff, 1989; Ryff & Singer, 2008), following ancient Greece philosophers’ distinct traditions, argue that SWB has two types or tradition, i.e., hedonism (including affect and life evaluation/satisfaction) and eudemonism

(psychological well-being). Others classify SWB into three: as life evaluations/satisfaction, affect (hedonia), and eudaimonia (psychological well-being). In this case, some authors (Deci & Ryan, 2006; O'Donnell et al., 2014) assert that life evaluation/ satisfaction is not a hedonic concept since it has cognitive dimension (unlike hedonia which is primarily emotional in nature).

The hedonism tradition (associated with the work of Aristippus of Cyrene) perceives well-being as happiness or pleasure. Here, well-being or happiness is considered to be an end rather than a process and the source of happiness is not given attention (whether it is right or wrong/moral or immoral). Hedonism has influenced other philosophies and theories like the utilitarian philosophy (e.g., Bentham). The eudaimonism perspective (which is Aristotelian tradition), on the other hand, defines well-being in relation to virtue, meaning, goal-directedness, purpose, or self-realization. In other words, eudaimonia is about knowing oneself (one's strengths and limitations) and choosing oneself or becoming oneself, within the context of the challenges of life. Here, well-being or eudaimonia is considered as more of a process than an end or outcome. It is asserted that having positive affect and satisfaction with life does not guarantee psychological well-being, unless the source of happiness is eudaimonia. It is believed that leading eudaimonic life ultimately results in happiness. Eudaimonism is also evident in current-day theories like humanistic psychology (e.g., Maslow's concept of self-actualization) and Ryff's work of the dimensions of psychological well-being (Deci & Ryan, 2006; Garcia, 2006; Olsson et al., 2012; Ryff & Singer, 2008; Watermana et al., 2010).

Hedonism and eudaimonism have their bases on different understandings of human nature. For hedonism, people are borne tabula rasa and then influenced by their environment. On the contrary, for eudaimonism, people are borne with contents and their job should be to identify and inculcate that content - self-realization (Deci & Ryan, 2006).

2.3.2. The Well-being of Adolescents

The well-being of adolescents, like that of other segments of a society, has different dimensions and these different dimensions are intertwined and influence one another. These dimensions could involve their feelings, relationships, physical health, living environments, and etc. (Camfield et al., 2008; Skattebol et al., 2013). Woodhead (2004) cited in Camfield et al. (2008), also listed five basic dimensions of children's well-being: cognitive abilities and cultural competencies (e.g. intelligence, communication skills, and technical skills); personal security, social integration and social competence (e.g. secure attachments, positive adult/peer relations, social confidence, sense of belonging); personal identity and valuation (e.g. self-concept, self-esteem, feeling valued and respected); sense of personal agency (e.g. self-efficacy, internal locus of control, positive outlook); emotional and somatic expressions of well-being (e.g. stress levels; sleeping and eating patterns, general health).

The different dimensions of adolescents' well-being are also recognized by the UNCRC. Some of them include: mental, spiritual, moral, and social development; the right to health; the right to play and recreation; standard of living; protection from labor exploitation; and etc (UNCRC, n.d.). Studying adolescents' well-being and making efforts to improve it is very important. Doing so enables to promote adolescents' right as demanded by the UNCRC (Camfield et al. 2008).

2.3.3. Theoretical Explanations of Well-being

There are various theories attempting to explain the causes of well-being. These theories are from different disciplines (like psychology, economics, public health, social policy, etc) and emphasize different underlying concepts/assumptions.

Economic theory of well-being. In economics, the common theories of well-being are those that consider income and employment central for well-being. In this case, higher income is associated with better well-being because money enables people to address many of their needs, such as food, shelter, health costs, etc. Here it is noted that increase in income does not necessarily result in the same degree of improvement in well-being, but a general increase in the same direction. Subjective perception of people about their well-being is not considered here. Instead, objective observation of indicators like income, consumption, and etc are used to measure well-being. Accordingly, the policy recommendation of such approach is increasing the income of societies in order to bring about or improve well-being. This approach is criticized, among other things, for neglecting the subjective perception of people about their well-being. In other words, judgment about one's well-being is done not by the person himself, but by external people, usually economists (Easterlin, 2003). In addition, we can criticize this approach for entirely focusing on income; neglecting other aspects of people's life such as social, psychological (cognitive and emotional), spiritual, and etc.

Eudaimonic well-being. The second theoretical approach to well-being is based on eudaimonic well-being. Two theories are frequently mentioned in this case, i.e., the theory of psychological well-being and Salutogenic Theory (Olsson, 2012). According to Ryff (1989), well-being should be understood not merely as happiness or pleasure rather as a process of self-realization or human fulfillment. Accordingly, she proposed the structure or dimensions of psychological well-being, based on her study of Aristotle's eudaimonism (Nicomachean Ethics, written in 350 B.C), human development, existential and humanistic psychology, clinical psychology, and utilitarian philosophy. The six distinct dimensions of psychological well-being are positive relations with others, environmental mastery, self-acceptance, autonomy, personal

growth, and life purpose (Ryff, 1989; Ryff & Singer, 2008). In Salutogenic theory, well-being is understood as sense of coherence (SoC). Indicators of SoC are perceptions of meaningfulness, comprehensibility, and manageability of life (Antonovsky, 1993 cited in Olsson, 2012).

The set-point theories of well-being. The third theoretical approach to well-being is the set-point theories of well-being, which is most common in psychology. The underlying idea of this approach is that every person has a genetic- and personality-based or determined set-point of well-being (happiness or life satisfaction). It is argued that negative life events (e.g., as loss of a job, serious injury) and positive life events (e.g., higher income, getting married) may decrease or increase one's level of happiness for the time being, nevertheless, after some time, the person's level of happiness will return to the initial set-point as a result of hedonic adaption. This means, both improvements and deteriorations in our lives have short-term impact on our SWB because we adapt to changes quickly (Easterlin, 2003).

One theory in this approach is called Homeostasis Theory. For this theory, every individual, irrespective of age, has a genetically determined level of SWB, in the positive direction. The set-point of subjective well-being (life satisfaction measured by PWI-SC) is hypothesized to have an average of 75% points. Like bodily functions (e.g., body temperature) are maintained, this set-point is protected (maintained and defended) by homeostasis or stabilizing forces such as adaptation, positive affectivity, and a system of cognitive protections. And, this situation is called homeostatically protected mood (HPMood). This theory also acknowledges that significant changes of life events, that are stronger than stabilizing forces (like perceived control and optimism) can affect SWB (Tomyn & Cummins 2010, Cummins 1995, 2010, cited in Tomyn, et al., 2011; Cummins 2002, cited in Thomas n.d.).

The set-point approach to well-being has been criticized based on empirical and public policy grounds. First, studies found out that though humans have a tendency to adapt to life events; adaption is not always strong or complete. For example, it is found that, with regard to income, adaption is almost complete and income's effect on well-being is short-term. On the contrary, adaption to changes in health and marriage is not complete and health and marriage related changes (both negative and positive) have long lasting impact on well-being. The other problem with this approach is that, by its implication, this approach discourages any policy or action to improve the environment and thereby bring about or increase well-being of citizens, since it claims that no lasting change on well-being is possible. In addition, this approach could discourage individuals from trying to improve their well-being (Easterlin, 2003).

Liking, needing, and wanting theories of well-being. The fourth approach to understanding well-being has three theories of well-being, i.e., liking, needing, and wanting theories of well-being. The liking theory of well-being is the one that is originally hedonic, based on the philosophy of Aristippus (who asserted that meaningful life is achieved by immediate gratification). According to this theory, well-being is all about maximizing pleasure and minimizing pain. Therefore, studies of well-being should focus on this issue. The second theory in this approach is called needing theory of well-being. According to this theory, there are universal and fundamental needs that should be fulfilled for all human beings. Fulfillment of such needs will result in well-being while failure to do so result in decreased well-being (Durayappah, 2010). Example of such theorization can be found in Maslow's (1943) theory of human motivation. According to Maslow, there are five basic and hierarchical needs/goals of human beings. These five fundamental needs, from bottom to top, are: physiological, safety, love, esteem, and self-actualization. Finally, wanting theory claims that well-being should be

understood in terms of the pursuing of desires or goals. In this case a person may get happiness from both the journey (wanting) and the destination (achievement of goals). However, the happiness gained from the journey (wanting or progress toward the goal) is supposed to be superior and longer lasting than that of the destination (Durayappah, 2010).

Multiply discrepancy theory. The fifth approach to understanding well-being is called multiply discrepancy theory. In this approach well-being/satisfaction is understood mainly as a function of comparison (of experiences or emotions), degree of expectation, and adaption. It is underlined that people always make comparisons to some standards such as one's past situation, other people's condition, ideal levels of satisfaction, and needs/goals. There are two types of discrepancies, i.e., upward comparison (when one's expectation is better than the actual condition) and downward comparison (when one's expectation is worse than actual condition). While upward comparison is associated with decreased satisfaction, downward comparison is related with increased well-being (Durayappah, 2010).

The top-down and bottom-up Factors. The top-down and bottom-up factor is the sixth approach. Here, well-being is understood in terms of the presence of two factors, i.e. bottom-up and top-down factors. And, the integration of these two factors is indispensable for full understanding of SWB. Bottom-up factors are related with objective aspects of well-being such as demographic factors (age, sex, income, education, race, marital status) and macro-social factors or societal characteristics (like economic development, democracy, freedom, equality, etc). It is found that national average happiness is higher for countries with better societal characteristics. Top-down factors are related with subjective perception of individuals about their well-being, in relation to their values and goals (Durayappah, 2010).

Orientation to happiness model. Orientation to happiness model is the seventh approach to conceptualizing well-being. In this theory, it is believed that there are different ways to well-being/happiness: positive emotions and pleasure (the pleasant life), engagement (the engaged life), and meaning (the meaningful life). It is found that different people prefer different ways to happiness and most happy people are those who use multiple ways, especially those who emphasized the engaged and the meaningful life (Durayappah, 2010).

The mental health continuum. The mental health continuum approach conceptualizes well-being as a continuum between languishing and flourishing. At the lowest level of the continuum is languishing which represents a very negative mental condition or ill-being. In this case, an individual is supposed to have low level of SWB. On the contrary, at the highest level of the continuum is flourishing which indicates a very positive mental condition or well-being or high level of SWB. SWB is believed to have emotional, psychological, and social dimensions (Durayappah, 2010).

2.3.4. Measuring Subjective Well-being (SWB)

Generally, there are two ways of measuring well-being. The first is objective measure of well-being that emphasizes objective observation of the different aspects of the well-being of a particular individual or group/society, by researchers or professionals. Such type of measures could involve observing household income, unemployment levels, neighborhood crime, level of educational and etc. The second way of measuring well-being is called subjective measure of well-being and it relies on self-report measures (Camfield et al., 2008; CDC, n.d; & Schwannauer et al., 2013).

There are various subjective measures of well-being that measure three different aspects of SWB, i.e., affect (hedonia), eudaimonia (psychological well-being), and life evaluations/

satisfaction (O'Donnell et al., 2014). These measures could be single-item or multi-item. It is found that multi-item measures are more reliable than single-item measures (Ryff, 1989).

Affect is about people's perception of their feelings or emotional state in a particular time; it shows how people experience life. Affect has two dimensions, i.e., positive and negative affect. While positive affect is about positive emotions like happiness, joy, contentment, etc, negative affect is about negative emotions such as sadness, anger, fear, anxiety, etc. Affect is measured in terms of the frequencies of Positive and negative emotions (Garcia, 2006; O'Donnell et al., 2014). Eudaimonic well-being (psychological well-being) is people's subjective perception regarding self-realization/actualization or whether they are leading a purposeful and meaningful life, among others. It is not yet well confirmed whether Eudaimonic well-being is one-dimensional or multidimensional (O'Donnell et al., 2014). According to Ryff (1989), however, eudaimonic well-being has six distinct dimensions: positive relations with others, environmental mastery, self-acceptance, autonomy, personal growth, and life purpose.

Life evaluations are people's cognitive evaluations or reflective assessments, based on how they remember, regarding their satisfaction in their lives. A person's evaluation of life satisfaction could be influenced by different conditions involving economic (income, education, work), social (family life, community life and values, environment), and Personal (physical health and mental health). Life evaluation is most frequently used measure of SWB. It is also favored by national statistical offices (O'Donnell et al., 2014). For the purpose of this study, one of the measures of SWB or life evaluation/satisfaction is used. The measure used in this study is called the PWI-SC and it is discussed in the methodology section of this paper.

2.4. Previous Researches: The Role/Effect of Martial Arts on the Well-being of Practitioners

There are many researches done regarding martial arts and its effect on practitioners. As it was discussed in the 'statement of the problem' section of this paper, majority of the studied found positive outcomes of the martial arts. However, there are also mostly recent researches that have reported negative or no effects of the martial arts.

2.4.1. Positive Role/Effect of Martial Arts on Practitioners

Different studies showed that participation in the martial art has multifaceted benefits for the well-being of the practitioners, including adolescents. And, these benefits can be broadly classified as physical and psychosocial benefits.

Physical benefits. It is crystal clear that physical activity is an invaluable means of securing health and wellness for human beings. As a result of lack of physical activity/exercise, in the world, two million people lose their lives a year (WHO, 2006 cited in Chowdhury, 2012). Lack of physical activity/exercises is responsible for many major health problems such as heart disease, cancer, diabetes, and depression (Armstrong et al., 2000 cited in Chowdhury 2012). Statistically speaking, it is estimated that lack of physical activity is responsible for 30% of the global ischaemic heart disease, 27% of diabetes, and 21% - 25% of breast and colon cancer (WHO, 2009 cited in Chowdhury 2012). From previous discussions, it can be understood that the training of martial arts/TKD is based on physical activities/exercise like stretching, aerobics, acrobatics, physical fitness, punching and kicking techniques, dance-like movements called *poomse*, and etc. Therefore, it can be argued that participation in TKD or any martial art is essential for the physical health of adolescent practitioners.

The effect of TKD on the physical aspect of adolescents' well-being is also studied by researchers. For example, Khan and Joshi (2011) studied the effect of TKD on adolescent boys'

flexibility, explosive power and strength. They included 30 adolescents aged 11-15 in their study which arranged a six-week of TKD training. They used dependent t-test (pretest and post-test) to compare the scores of adolescent in the different dimensions. And, they found that six weeks of training in TKD resulted in a significant improvement in the boys' flexibility, explosive power, and strength.

Another study by Fong et al. (2011a), examined the role of TKD training on sensory organization and standing balance of children (mean age 7.6 +/- 1.3 years) with developmental coordination disorder. The research design used was randomized control design that included 44 children with developmental coordination disorder (21 of them took daily TKD training while the rest served as control) and 18 healthy children (used as control). The TKD training lasted for three months. And, findings showed that TKD training improves sensory organization and balance of children with such problem. The authors also suggested that therapists could include TKD in their therapies to help such children.

In another similar study Fong et al. (2011b), studied the effect of TKD training on adolescents' (aged 11-14 years old) development of balance and sensory system. The research employed cross-sectional controlled trial that had three participant groups, i.e., 21 adolescent practitioners of TKD, 21 adolescents who did not do TKD, and 24 adult participants. Results showed that training in TKD can improve adolescents' development of postural control and vestibular function. The authors also recommended that clinicians use TKD training to help adolescents with problems related to balance or vestibular dysfunctions.

Draxler et al., (2010), studied whether martial arts practitioners have better health-related quality of life than the general public in German. From eight different martial arts, 2855 martial artists participated in the study. Findings showed that martial artists had a better health-related

quality of life than the general public and especially the physical aspects of their health were rated better than that of the psychological ones.

Psychosocial benefits. The psychosocial benefits of martial arts are also studied by researchers. Binder (2007), in a review of studies regarding the effect of martial arts, concluded that participation in the martial arts is negatively associated with anxiety, aggression, hostility, neuroticism, and feeling vulnerable to attack; while it is positively related with self-confidence, independence, self-reliance, self-control, self-esteem, and easy-going and warm-hearted personality.

In relation to aggression, Steyn and Roux (2009) conducted a study to determine whether participation in TKD lowers aggression and increases psychological well-being of adolescents. They used a survey design by which they compared TKD students with that of Hockey players and non-sport adolescents. Findings showed that (1) TKD adolescents' scores on verbal aggression and hostility measures were significantly lower than the other groups and (2) TKD adolescents' scores on personal growth and self-acceptance were significantly higher than the rest.

In the case of self-regulation, Lakes and Hoyt (2004) studied TKD with the aim of determining the impact of school-based TKD training on children's self-regulatory ability. Participants (children, from KG to grade five) were assigned randomly to treatment (three month TKD training) and control (traditional physical education) groups. The result of the experiment is that children in the TKD group showed greater improvements in cognitive self-regulation, affective self-regulation, prosocial behavior, classroom conduct, and performance on a mental math test.

Regarding personality, Kurian et al., (1994) studied TKD students to determine whether there is a relationship between training in the martial arts and personality factor. The study included a sample of 72 boys (mean age = 9.8 years) who responded to the children's personality Questionnaire. Findings showed significant positive relationship between belt ranking and self-reliance and enthusiastic optimism. The authors underlined that it is belt level (hierarchy) not the time spent in the training that mattered in the study.

In relation to risk behavior and overall well-being, Goldsmith (2013) studied adolescents in traditional martial arts. The study included 55 adolescent practitioners of different traditional martial arts who responded to the American CDC's Youth Risk Behavior Surveillance System (YRBSS) and the Piers Harris-2 (PH-2) self-concept scale. The study came up with interesting findings. First, contrary to the researcher's expectation, training time could not predict both risk behavior participation and perception of well-being. The finding also showed that the particular style of the traditional martial arts did not have an effect on risk behavior. But, when the researcher compared the YRBSS score of the martial artists with that of the samples of the national data, it is found that the participation of martial artists in risk behavior was significantly lower.

In another study, Movahedi et al., (2013) studied the effect of pattern practice on the social interaction of children with autism spectrum disorder (ASD). They used 30 such children as participants and divided them into two equal groups. The first group received pattern training for 14 weeks. The second group was used as a control and received no training. The researchers measured social interaction of children in both groups at three different times, i.e., before the intervention, at the end of the 14-week training, and at one month follow up. The researchers found that pattern practice significantly improved social dysfunction in the martial art group.

And this change was evident even during the one-month follow-up. No change observed in the control group.

Zivin et al., 2001 investigated the role of school-based traditional martial arts training on the behavior of juveniles at high risk for violence and delinquency. Participants in this study were 60 middle-school boys. The boys were divided into two groups, i.e., treatment and wait-list control group. The training was given three days a week for 30 sessions, each session having 45 minutes. The researchers measured 14 variables at pre-test and post-test. The measures included four teacher rating scales from the Sutter-Eyberg Student Behavior Inventory, five self-report scales of the Piers-Harris Self-Concept Scale, four computerized measures of attentional self-control from the Intermediate Visual and Auditory Continuous Performance Test, and a count of permanent expulsions from school. The researchers found that out of 14 variables measured, students in the treatment group, exhibited improvement on 12 of them while students in the control group improved on five but worsened in eight. The researchers also made students in the control group take the martial arts training. And found that, after the training, the negative scores of these boys changed and got close to the scores of children in the treatment group. The pre and post test score of the two groups showed significant improvement regarding resistance to rules, impulsiveness, and inappropriate social behavior. The researchers also made a four month follow-up on teachers' rating and found that positive changes continued. The authors concluded that school-based traditional martial arts training can be instrumental in preventing and reducing adolescents' violent behavior and delinquency.

2.4.2. Negative and No Effects of Martial Arts on Practitioners

The negative effects of the martial arts can be classified as psychosocial problems, physical injuries, and improper weight management. Endresen and Olweus (2005), cited in

Vertonghen and Theeboom (2010), studied what are called power sports (weightlifting, wrestling, karate, judo, and TKD), in Norway. They reported that participation in such sports increases youth anti-social behavior. However, this study was criticized for its methods including its self-composed questionnaire and its failure to address the issue of types of guidance in the martial arts.

Wargo et al., (2007) studied the personality characteristics of martial artists of TKD and karate schools. The study has 40 participants with the age range between 21- 55. They compared yellow-belt (lower level) and black belt (higher level) students on Minnesota Multiphasic Personality Inventory – 2nd edition (MMPI-2). The study found that (1) female black belt students exhibited more paranoia and more anger and more family problems, (2) both yellow and black belt female students showed higher degree of anxiety and health concern than males, and (3) overall, black belts, compared to yellow belts, exhibited more health concerns.

Lotfian et al., (2011) compared anger ratings of girls in the martial arts (judo and karate) and in other categories (swimmers and nonathletes), in Iran. Participants in this study were 291 female adolescents aged 11-19. The measure used in this study was Adolescent Anger Rating Scale of DMBurney. Results indicated significant differences in total anger score among the groups: the anger scores of Judo students were the highest, followed by nonathletes, karate students, and swimmers. There was also difference among the groups in relation to instrumental and reactive anger. But, no difference was found for anger control.

There are also some studies regarding injuries in the martial arts. These studies might be divided into two, i.e., those which studied injuries in training and those that studied injuries in competitions/tournaments. Birrer (1996), cited in, Landa (2004) conducted a longitudinal study of 15, 000 martial artists internationally for 18 years and found that though injury rates were low

in general, sparring was the main reason for 74% of injuries in TKD and karate. In another study, Gertland et al. (2001) cited in Landa (2004), reported that in a martial art called Muay Thai, the yearly rate of injury was 2-14/1000 practitioners.

Pieter (2005) studied the literature regarding injuries of children in the martial arts. The review included retrospective and prospective studies that were done after 1980. In this review, three martial arts, i.e., TKD, Judo, and Karate were addressed. Results showed that gender-wise, female children have lower level of injuries, overall. However, when compared based on exposure to competition, females' level of injury became higher. It is also found that different body parts are likely to be injured by different martial arts. In TKD more injured part of the body is the lower extremities. In judo, the upper extremities are more injured. And, in karate, the head and the face are the ones to be injured more. Different types of injuries are also found to be related with different martial arts. While sprains (joint injuries) are common in TKD and judo, epistaxis (bleeding from the nose) is common in karate. These injuries occurred while the injured children were trying to execute their frequently used attacks in their styles (roundhouse kicks in TKD, throwing in judo, and punching in karate). Preventive strategies identified by the author of the literature review include: disallowing early participation of children in competitions; disallowing strikes to the head and face; using closed fists instead of open hands in TKD and karate, using foot protection in TKD; making the use of mouth guards mandatory; and using well-experienced referees (Pieter, 2005).

Zetaruk et al., (2004) also studied martial arts injuries in relation to regular trainings (not competitions) by comparing five styles. The study used an injury survey of a one year retrospective cohort of 263 martial artists in Shotokan karate, Aikido, TKD, kung fu, and tai chi. Findings showed that the rate of injury (% of injuries required time off from training) in TKD

was the highest (59%) followed by aikido (51%), kung fu (38%), karate (30%) and tai chi (14%). The risk of injury and multiple injuries was three times greater for TKD students than karate students. Higher risk injuries, on more parts of the body, are associated with TKD (head/neck, groin, upper extremity and lower extremity injuries). It was also found that more experienced practitioners (≥ 3 years) were twice as likely to be injured as less experienced practitioners. Injuries were found to increase as training time per week increases. Interestingly, students below the age of 18 were found to be less likely to be injured compared to adults and no sex difference was found. The authors concluded that “martial arts appear to be safe for young athletes, particularly those at beginner or intermediate levels” (p.29).

Kazemi et al., (2009) conducted a retrospective longitudinal study of injuries in TKD competitions. They used nine-years of existing data. The data consists of 904 injury reports in 55 individual competitions. Results showed that the three most frequently injured body parts are: the head (19%), foot (16%), and thigh (9%). These injuries occurred mostly while players were executing defensive kicks (44%) and offensive kicks (35%). Most common injuries are contusions/ bruise or discoloration of skin (36%), sprains/ joint injury (19%), and strains/ injury because of overuse of the muscle (15%). The research also compared color (lower) belts and black belts. In the case of type of injury, while colored belts had higher injury of contusions, black belts had higher sprains and multiple injuries. In the case of the context of injury, it is found that colored belts were injured more when they were kicked and black belts were injured more as a result of the impact previous injury. The researchers also investigated whether a change of competition rule (that guaranteed more points to strikes to the head) had an effect on types of injury. They found that rule changes had no effect. Finally, the researchers reported that TKD competitors below the age of 18 are more likely to be injured in competitions.

In relation to problems related with weight management, Kazemi et al., (2011) studied the rate of weight cycling in junior TKD athletes and its effect on performance. The authors explained that matching of players in TKD competitions is mainly based on weight categories. Therefore, players' weights are measured 16-20 hours before competition. It is a common practice among TKD fight players to engage in a rapid weight reduction activities to be fit for a lower weight category (than one's natural weight). This practice is considered advantageous among athletes since the rapid weight reduction practice is abandoned immediately after weigh-in and the players can return to their previous weight and compete with players with lower body mass. However, rapid weight reduction practice has negative biological effects including tension, dizziness, headaches, and confusion. Kazemi et al. (2011) used 108 junior athletes (14–17 year-old) in their study. They measured the weights of the players two times, i.e., before competition (during weigh-in) and immediately before their first match. Results showed a significant increase of athletes' weight (in both genders) from the first measure to the second. Nevertheless, this practice was not found to indicate who would win.

There are also some studies which found no effect of the martial arts on practitioners. Yong (2005) studied the impact of Shotokan karate training on children's symptom of psychopathology and self-esteem. Participants in this study were 30 3rd, 4th, and 5th grade students. The participants received karate training for five week and were pre- and post - tested on the following measures: the Child Behavioral Checklist (CBCL), the Revised Child Anxiety and Depression Scale (RCADS), and the Rosenberg Self-esteem Scale (RSE). Findings showed no relationship between the five-week training and the measures of psychopathology and self-esteem, except for a significant decrease in depression scores. The researcher pointed out that the

absence of relationship could be attributed to small sample size and/or power of the study and short period of training time in the martial arts.

Kellogg (2003) studied the effect of a type of martial art training called *Kuk Sool Won* on adolescents' aggression, assertion, introspection, and respect. The total number of participants in this study was 90 martial artists (aged 12-30) who began practicing the martial art during their teens. Results showed that there was no significant relationship between three clusters of variables, i.e., length of training, level of dedication to the martial art, and the predicted variables (i.e., aggression, assertion, introspection, and respect). The author attributed the absence of the relationship partly to lack of traditional focus in the training.

In relation to the use of the martial arts as therapeutic methods to reduce problematic behaviors, Esterman (2012), conducted a program evaluation of group martial art therapy for children. This program included talk therapy and behavior therapy in addition to a training in two martial arts called Aikido and Ninjutsu. Participants in this study were children aged 6-16 and their parents. Of 41 children, only 26 children completed the program that lasted for 20 sessions. The children were categorized into three groups based on their age, kids (ages 6 to 8), preadolescents (ages 9 to 12), and teens (ages 13 to 16). The author of the study found no significant difference in the children's behavior. However, the author underlined the likelihood by which this kind of program might be effective over time.

2.4.3. Traditional vs. Modern Martial arts

There are also studies that found participation in different types of the same martial arts (i.e., traditional and modern) result in different outcomes. Trulson (1986) studied different forms of TKD (modern vs. traditional) in relation to juvenile delinquency. The participants in this experiment were 34 male high school students aged 13-17. All of them were categorized as

juvenile delinquents based on their score on Minnesota Multiphasic Personality Inventory (MMPI). Participants were assigned into three groups by matching them based on their age, socio-economic status, and scores on personality inventory. The first group received a traditional TKD training (which emphasized meditation and reflection, TKD's philosophy, and pattern practice, among others). The second group participated in modern form of TKD (which emphasized fighting and self-defense techniques). The third group was used as a control group (participated in non-TKD trainings like jogging, football, etc). All groups were trained by the same instructor for six months. Before and after test results showed that students who received the traditional TKD training exhibited reduced aggressiveness and anxiety but improved self-esteem, social adroitness, and value orthodoxy. On the contrary, adolescents in the modern TKD (group two) exhibited the opposite of group one (including large increase in aggressiveness and greater tendency to delinquency). Adolescents in the control group showed no significant change except an increase in self-esteem and social adroitness.

The second research was done by Nosanchuk and MacNeil (1989) in relation to aggression. They investigated, among other things, whether aggression level varies among students in traditional and modern martial arts. Seven martial arts (karate, TKD, and jujutsu) clubs and 38 respondents participated in the study. Based on their observations, the researchers divided the clubs as traditional and modern. Accordingly four of the clubs were classified as traditional. They found that level of aggressiveness was inversely correlated with belt level, in the traditional martial arts and the opposite was true for the modern martial arts.

2.5. Theoretical and Conceptual Frameworks

2.5.1. Theoretical Framework

The using of theoretical frameworks has been very rare in the study of the martial arts and its role on practitioners (Jan & Petra, n.d.; Kellogg 2003). Fuller (1988) cited in Kellogg (2003) advised that researchers who study the martial arts use theoretical frameworks to explain how the effects produced by martial arts on the practitioners work.

I have found it difficult to find exhaustive and precise theoretical explanations to guide my study of TKD and adolescents' well-being. However, based on the above suggestion, I have made an effort to make use of a theoretical framework and there by develop my own conceptual framework. Accordingly, I found theoretical explanations of well-being that are based on genetically driven needs pertinent for the purpose of this study. Such theories could include choice theory in psychology (Glasser's choice theory) and Maslow's (1943) theory of human motivation or hierarchy of needs.

According to choice theory in psychology, human behavior is driven by a desire to meet five genetically-based fundamental needs. These fundamental needs are: Survival (food, clothing, personal safety, etc); belonging (love, connecting, to feel loved and wanted, etc); power (significance, competence, personal growth, etc), freedom (autonomy, choice making); and fun (learning, entertainment, enjoyment, etc). This theory also asserts that human behavior consists of four interrelated components, i.e., thinking, acting, feeling, and physiology. While humans can have great control over the thinking and acting aspect, they have much less control over their feeling and physiology. However, humans can still control their feeling and physiology indirectly by working on their thinking and action. This theory also states that most social evils and mental

problems are results of unhappiness which in turn is a result of mostly poor relationships/connectedness (Sliwinski, n.d.; William Glasser Institute, n.d.).

Another similar theory is Maslow's (1943) theory of human motivation or hierarchy of needs. According to this theory there are five basic and hierarchical needs/goals of human beings. These five basic needs, from bottom to top, are: physiological (biological and physical needs like hunger/food); safety (from threat or danger); love (affection and belongingness); esteem (self-respect based on self-evaluation regarding one's achievement/ strength/ independence/ autonomy etc and reputation/prestige/attention, etc); and self-actualization (to know and be oneself and to use one's potential to the fullest, for ultimate happiness). Maslow (1943) also asserts that human behavior is motivated by a desire to achieve this goals one after another; without achieving the initial need one cannot move to the higher level needs. Human want is, therefore, unlimited. Anything that hinders the achievement of these fundamental needs or inability to achieve this goals results in psychopathology.

From the above discussions regarding the two theories, it can be understood that these two theories have, at least, four basic similarities. And, these similarities lay the foundation for this paper's conceptual framework. First, both theories underscore that human behavior is driven by a desire to fulfill genetically-based fundamental needs. Second, the theories also underline that these needs are not only biological/physiological, but also psychological and social. Third, the theories emphasize that failure to fulfill the fundamental needs of human beings results in psychopathology and social evils or ill-being. Finally, it appears that both theories have optimistic approach toward the nature of human being; while choice theory stresses humans' ability to make choice and improve their well-being, Maslow's theory asserts that humans by their nature strive for growth and improvement.

2.5.2. Conceptual Framework

Based on the ideas of the above-discussed two similar theories (i.e., choice theory and Maslow's theory) and based on my literature review regarding the nature of TKD training and SWB, I designed the following conceptual framework to guide my study. In this conceptual framework it is shown that the different components of the training of TKD help adolescents meet their fundamental needs and thereby increase their level of SWB.

From the discussion, in the literature review, regarding the aspects of TKD training, it can be learned that the environment of TKD incorporates the following elements: club/association (e.g. WTF)/community membership, physical exercises (stretching, aerobics, acrobatics, physical fitness, etc), techniques of TKD (kicks, punches, blocking, and stances), pattern practices, fight/sparring trainings and competitions (local and international, including Olympic), self-defense trainings, philosophy and ethics, meditation and breathing, belt ranking, breaking practices, demonstration ceremonies, a teaching methodology that emphasizes practice and students' experience, and etc. The various aspects of the TKD training, I believe, help to bring about and enhance the well-being/SWB of adolescents by enabling them to meet their different fundamental needs as identified by the two theories.

The five fundamental needs of choice theory can be met by the TKD environment as follows. The survival needs of adolescents can be addressed by different aspects of TKD including physical exercises (stretching, aerobics, acrobatics, physical fitness, etc), techniques of TKD (kicks, punches, blocking, stances), pattern practice, sparring trainings and competitions, self-defense trainings, and etc. All these components of the training of TKD enable adolescents to be healthy, strong, and skillful in defending themselves. The belonging need can be fulfilled by club, association, and community memberships and by friendship among club members. The

need for power and freedom could be met by the belt ranking system which indicates the adolescents' mastery of and competence in different aspects of TKD including techniques, forms, competitions, self-defense, and etc. Adolescents' need for fun can be met by TKD which provides playful environment and which teaches different exotic techniques and movements in a small group setting including peer learning.

The TKD environment could also enable adolescents to meet Maslow's five basic and hierarchical needs. Physiological/biological/physical needs of adolescents could be addressed by mainly two aspects of the training: physical exercises (stretching, aerobics, acrobatics, physical fitness, etc) and meditation/breathing practices. TKD can help to meet the safety need of adolescence by its ability to teach students self-defense and fighting skills, in addition to internal peace and calmness. The need for love/belonging is fulfilled as the training provides an opportunities for club, association (e.g. WTF), and community memberships and friendship among club members. Esteem need is addressed since the training could (1) enable adolescents to be strong, competent, and independent, and (2) open the door for fame and attention. Physical exercise, self-defense, competition (national and international), demonstration ceremonies (breaking etc), belt rankings and the like are responsible for this. Finally, the need for self actualization can be addressed by TKD training since it is the ultimate goal in traditional martial arts. TKD training could be an ideal environment for adolescents to know their strengths and weaknesses; know and become their true selves; and to use their potential to the fullest.

Participation in TKD training is, therefore, essential to bring about and enhance SWB of adolescent practitioners. SWB may have different dimensions based on mainly the fundamental needs of human beings. For example, as per the PWI-SC, SWB has seven dimensions, i.e., standard of living, health, life achievement, personal relationship, personal safety, community

connectedness, and future security. Excepting standard of living, I believe that TKD training can address all the dimensions of SWB of adolescents. The TKD environment could help maintain and enhance adolescents' physical health through its physical exercises and meditation and breathing practices. The training can also provide adolescents with the opportunity to learn and master skills, be competent, and move up on the ladder of the belt system. This helps to increase the adolescents' sense of achievement in their lives. Personal relationship and community connectedness are also addressed by the TKD environment as adolescents are members in clubs, associations, and communities of TKD and as they can form friendship with their fellow students in their club. In addition, the philosophy and ethics of TKD teaches adolescents to be pro-social (unity, respect, loyalty, etc). Personal safety and future security can be addressed by TKD since adolescents learn self-defense and fighting skills along with the philosophy of TKD and meditation/breathing practices that leads to internal peace and calmness.

Chapter Three: Research Methodology

3.1. Research Design

This study used a mixed methods research design. According to Creswell (2009), mixed methods research is based on pragmatic world view or knowledge claim, i.e., it is consequence-oriented, problem-centered, and pluralistic. In this strategy of inquiry, both qualitative and quantitative data are collected and collection of data can be done either concurrently or sequentially.

Mixed methods research is selected for this study because of a number of reasons. First, I believe in pragmatism philosophy. According to Creswell (2009), pragmatists underscore that what matters is not the philosophy of reality or knowledge as purely quantitative (objective) and qualitative (subjective), but rather the nature of the problem under investigation. Pragmatists also underline that knowledge can be gained in both objective and subjective ways. Second, the problem under the investigation of this study requires the use of mixed methods. The role of martial arts training is somehow well-studied in other countries. This enabled me to have some insight into the constructs in this area of study to conduct quantitative study. However, this research issue is not studied in Ethiopia. This opened a door for qualitative investigation. Thirdly, it is obvious that both the quantitative and the qualitative methods have their own limitations. The quantitative method fails to address subjective aspects of the issue while the qualitative method fails to address the objective dimension. Therefore, conducting mixed methods research enables me to have the advantage of using the strengths of each method and to compensate for the weaknesses of each method.

Among the different types of mixed methods research approaches, this study employed concurrent triangulation approach by giving equal weight for both the quantitative and

qualitative methods. According to Creswell (2009), in this approach, the researcher uses both quantitative and qualitative methods and collects both quantitative and qualitative types of data concurrently. Using this method helps to triangulate results of a study (from both quantitative and qualitative methods) by confirming, cross-validating, or corroborating results.

3.2. Study Area

This study was conducted in Addis Ababa city which is the capital city of Ethiopia. According to the City Government of Addis Ababa (2014), Addis Ababa, as a capital city of Ethiopia, was founded in 1886 by Emperor Menelik II and his wife Empress Taytu Betul. According to CSA (2012) cited in City Government of Addis Ababa Bureau of Finance and Economic Development (2013), the total area of the city is 540 km² and the projected population of the city in 2012 was 3,048,631, making the population density 5,645.61/km². The sex ratio (male/female) was .91:1. Agewise, there are 681,170 people under the age of 14; 2,228,510 people in the age group of 15-64; and 151,716 people above 65 years of age. As a result, the percentage of economically dependent people in the city is 37.4%.

Currently, Addis Ababa is not only the capital of Ethiopia but also the seat of different continental and international organizations like African Union and United Nations Economic Commission for Africa (UNECA). The administration of the city is divided into three major hierarchies, i.e., city level, sub-city level, and *wereda* level. The city of Addis Ababa has 10 sub-cities and their 116 *weredas* (City Government of Addis Ababa Bureau of Finance and Economic Development, 2013).

In addition to being a host for many continental and international organizations, Addis Ababa is a city where different martial arts are practiced by its dwellers. To observe this, one can simply move around the city. Everywhere in the city, it is common to see banners that advertise

different types of martial arts and their graduation ceremonies. Most frequently observed types of martial arts in the city are world and international TKD, different forms of Chinese Kung Fu, and Japanese Karate.

3.3. Population of the Study

This study was about the role of World TKD training for adolescents' well-being. Hence, the population of this study was mainly adolescent (12-18 years old) practitioners of World TKD in Addis Ababa city. According to Addis Ababa's WTF and Addis Ababa Sport Commission (personal communications, 07/03/2014), the total number of adolescent practitioners of world TKD is unknown, but the total number of registered world TKD clubs. Accordingly, there were 42 registered world TKD clubs in Addis Ababa. There were also clubs which were not registered by Addis Ababa WTF and Addis Ababa Sport Commission because of different reasons (e.g., failure to fulfill minimum requirements like facilities of shower and toilet). I attempted to identify these unregistered clubs by asking my trainer of TKD. Accordingly, 11 clubs were identified. Therefore, the total number of world TKD clubs in Addis Ababa city was supposed to be 53.

3.4. Sample Size and Sampling Procedure

3.4.1. For the Quantitative Part of the Study

The quantitative part of this study sought to do one major statistical analysis, i.e., one way ANOVA (among TKD adolescents). Cohen (1992), who is a frequently cited author in the case of power analysis, strongly recommend that researchers determine sample size for studies which test hypotheses (like ANOVA) based on the concept of power analysis, so that sufficient sample size is secured that enables researchers to minimize statistical errors. He further argues that though power analysis is very crucial in statistical studies, it is "neglected" mainly because

of “the inaccessibility of a meager and mathematically difficult literature” (p. 155). In order to deal with this problem, he provided a handbook that has a calculated sample size table specifying sufficient amount of sample size for different statistical tests given particular values for α (.01, .05 and .10), power (.80), and effect size (small, medium and large).

Based on Cohen’s (1992) advice and expectation of some attrition rate, the sample size of this study was determined. Specifying a two-tailed test with the conventional α (.05) and power (.80) and with a large effect size (expecting large magnitude of mean difference) for the ANOVA (.40), the sufficient sample size required for this study was known. For the ANOVA which has three groups, a total of 63 TKD adolescents (21 in each group) can be sufficient. However, the final sample size was made to be 108 TKD adolescents to compensate for a possible dropout of respondents and missing data.

To select participants for the quantitative aspect of this study, one-stage cluster sampling was utilized. The reasons for this are: (1) the total number of TKD adolescents was unknown and there was no sampling frame, (2) the difficulty and expensiveness of preparing the sampling frame by the researcher, (3) the population of the study was found in naturally existing clusters (clubs of TKD), and (4) the size of each cluster (TKD club) was unknown since new adolescents always got registered and existing ones terminated and since many TKD clubs did not have well-organized list of their trainees.

The total number of TKD clubs identified in Addis Ababa was 53 and four TKD clubs were sampled randomly using lottery method. Then, the clubs were asked whether they were willing to participate in the study or not. All the clubs agreed but two of them wasted too much time of the research by postponing data collection schedules. Therefore, they were replaced by

two other randomly sampled clubs. And all of the adolescents in the four clubs were included in the study.

3.4.2. For the Qualitative Part of the Study

Determining sample size for qualitative studies is quite different from sample size determination in quantitative studies since the aim of qualitative research is not primarily to make generalizations about a large population (Creswell, 2007; Lyons & Doueck, 2010). Sample size determination in qualitative research is hence a subjective process that may continue till the end of the study (Lyons & Doueck, 2010). And, as a general rule, it is recommended to study few participants in an in-depth manner to the extent resources (like time and finance) permit (Creswell, 2007; Lyons & Doueck, 2010). Accordingly, a total of 12 participants, eight TKD adolescents and four coaches, were included as participants in the qualitative part of this study.

A non-probability sampling technique of purposive sampling with maximum variation strategy was utilized to identify participants for the qualitative part of the study. According to Creswell (2007), purposive sampling is the most common type of sampling in qualitative studies. And within this framework of purposive sampling, there are a number of qualitative sampling strategies (e.g., maximum variation, homogeneous, and etc). In maximum variation strategy of purposive sampling, according to Creswell (2007), the researcher samples elements (from a given population) that are different from one another. This strategy helps to capture diversity and to search for themes or communalities among different participants.

Based on the assumptions of maximum variation strategy of sampling, efforts were made to select two TKD adolescents of different gender and belt levels from each of the four clubs of TKD. This means, there would be a total of eight adolescent participants. In addition, all the head

instructors of TKD of these clubs were included in the qualitative part of the study (background information on participants is provided in chapter four).

3.5. Data Sources and Data Collection Tools

The main source of data for this study was primary data. Two tools of data collection were used, i.e., self-administered questionnaire and in-depth interviews. The self-administered questionnaire was used for the quantitative part of the study to collect data from adolescents. This questionnaire had both close- and open-ended forms. And it included issues like background information on adolescents, a measure of adolescents SWB, and adolescents' perception of benefits of TKD and problems of practicing TKD. The questionnaire was prepared in English language and administered in Amharic language, after it passed through a back translation.

In-depth interviews were designed to be held with TKD adolescents and their instructors. In both cases, guiding questions were prepared and used. The In-depth interview which was held with sampled TKD adolescent focused on issues like their perception of the benefit of TKD and problems of practicing TKD. Coaches of TKD in each sampled club were also interviewed about the nature of TKD training and the benefits and problems of TKD. All the in-depth interviews were tape-recorded and transcribed verbatim.

3.6. Variables and Measurement

The quantitative part of this study was mainly concerned with determining the SWB of TKD adolescents and comparing their scores among themselves (using one way ANOVA). In the case of the comparison, the independent variable was TKD adolescents' belt level and the dependent variable was the SWB of adolescents.

Belt level in TKD is conceptually defined as a practitioner's rank in the hierarchy of TKD. TKD, like other martial arts, has belt ranking system. According to my trainer of TKD (personal communication, 10/3/2014), this ranking system starts from white belt (new student) and continues to progress to higher color belts: yellow, green, blue, brown (not found in the official WTF list), red, and different Dan/ degrees of black belts (1st Dan to 9th Dan). Belt level in TKD was measured in this study at ordinal level by identifying the belt ranks of the TKD adolescents and dividing them into three categories as per the suggestion of TKD coaches. The categories are: lower level belts (white, yellow, and green belts), middle level belts (blue and brown belts) and higher level belts (red belt and above).

SWB is conceptually defined as "a normally positive state of mind that involves the whole life experience" (Tomyn et al., 2011a, par. 2). Adolescents' SWB in this study was measured using a seven-items scale called the Personal Well-being Index-School Children (PWI-SC). PWI-SC is one of the parallel forms of Personal Well-being Index-Adult (PWI-A) which originated in Australia.

The Personal Well-being Index (PWI) scale contains seven items of satisfaction, each one corresponding to a quality of life domain as: standard of living, health, achieving in life, relationships, safety, community-connectedness, and future security. These seven domains are theoretically embedded, as representing the first level deconstruction of the global question: 'How satisfied are you with your life as a whole?' (IWbG, 2013, p. 10).

In the case of all versions of PWI, the scale asks respondents how satisfied they are with the different domains of their quality of life. The PWI has 11-point satisfaction scale that range from 0-10, for each domain or question. The lowest point (0) indicates 'no satisfaction at all' while the highest point (10) indicates 'complete satisfaction'. The middle point (5) indicates

‘neither dissatisfaction nor satisfaction’ or ‘neutral’ position. The PWI can be administered in two ways, i.e., in verbal and written forms and it should be self-completed by respondents based on their understanding of the question (there should be no elaboration of questions by the researcher/data collector) (IWbG, 2013). In this study it was administered in a written form.

PWI can be scored and analyzed in two ways. The first approach is analyzing each of the seven domains separately. The second way is summing and averaging the scores of all the seven domains in order to get the score of subjective well-being or PWI (this one is used in this study). In so doing, some standardization of the scores is performed. This is done by converting the scores that ranged from 0-10 into points that range from 0-100. To do so, one can simply bring the decimal point to the right. For instance, a score of 8 is converted into 80 points and a mean score of 7.56 is converted into 75.6 points. This standardization is designed to enable direct comparison among results of different versions of PWI and other scales (IWbG, 2013).

The mean scores of the scale can be interpreted and referenced to two types of normative data. First, if we are concerned with an individual person’s score of PWI, we can compare it with that of the normal distribution of individuals within a population. In the case of Australia, the normative range for individuals is between 50 and 100. Second, if we are interested in groups, we can compare the score of a group with the normal distribution of group means. In this case, the normative range of Western means is between 70-80 points and Australian mean is between 73.4 and 76.4 points (IWbG, 2013). It is noted that the normal distribution of group means of Asians (China and East Asia) is some 10% lower than Western and Australian means, i.e., it has a range of 60-70 points and a mean of 65 (Lau, 2013).

The PWI-A scale has acceptable psychometric properties (validity and reliability). In the case of construct validity, IWbG (2013) reported that “the combination of both unique and

Before administration, this scale was reviewed by my colleagues at Mizan-Tepi University's psychology and sociology departments, for content validity and cultural issues. The scale was also back translated by two psychologists and commented by a language professional. During the double translation what was done was: first the scale was translated from English to Amharic language by a psychologist. Then the Amharic translation was back translated into English language by another psychologist. Finally, a comparison was made between the original scale and the last translation and the translations were accepted.

3.7. Procedure of Data Collection

The first step in the data collection was to contact the head instructors of each sampled TKD club to explain about the research and arrange schedules for delivering consent forms, administering questionnaires, and holding the in-depth interviews. Schedules for data collection were fixed by all clubs for different times.

The quantitative data was collected when adolescents came to their clubs for training. During data collection, I was present in the gyms with the coaches, coordinating and monitoring the process. For those few adolescents who did not appear in the gyms at that particular day of data collection, questionnaires were delivered to them through their coaches and collected from the coaches later on. Data for the qualitative study was collected by interviewing TKD adolescents and their coaches at their gyms. The interviews took up to 90 minutes. All of the interviews were tape-recorded and then transcribed verbatim. No incentive was provided for the participants.

3.8. Data Analysis and Presentation

3.8.1. Data Analysis for the Quantitative Part of the Study

After the quantitative data were collected using the questionnaire, the first step was data cleaning and management. Each questionnaire was checked for problems like response sets, inappropriate responses, no response, and illegible respondents. All these problems were found, but only illegible respondents, i.e., two TKD adolescents above 18 years were excluded from further analysis. However, questionnaires with response sets, no response, and inappropriate responses were not thrown away. Instead, they were retained to be entered into SPSS version 20 as missing values, because these questionnaires had other appropriate and necessary responses for other questions. Meanwhile, for the open-ended questions of the questionnaire (e.g., in relation to adolescent's perception of benefits and problems of TKD), coding was done to identify major themes so that these questions would be analyzed quantitatively.

Then, the next step was entering the data into SPSS and manually checking that the data were properly entered. After this, the data that was used for parametric analysis were checked using SPSS for meeting two of the fundamental assumptions, i.e., normality and homogeneity of variance. Other assumptions (random samples, interval/ratio level dependent variable, and an independent variable having independent categorical groups) had already been met. Normality and outliers were checked using descriptive statistics (like mean, SD, range, skewness etc), histograms, and box plots. The dependent variable was found to be approximately normally distributed in all groups of the independent variable. Homogeneity of variance was also checked using Levene's test. It was found that the three groups had equal variance ($F(2,81) = 2.60, p > .05$).

After this, descriptive statistics was used to summarize the samples characteristics and then three major statistical procedures were carried out using SPSS. First, estimation of TKD adolescents' level of SWB was done using the PWI-SC. Both point and interval estimations were done at 95% confidence level. Second, one way ANOVA was computed to see whether there was a significant difference, in terms of SWB, between TKD adolescents classified into three groups (lower, middle, and higher belts). Finally, frequency distributions and percentages were computed for some open-and close-ended questions. These questions were regarding TKD competitions and its associated problems and TKD adolescents' perception of the benefits and problems of TKD for their well-being. Multiple response set techniques were used for questions which allowed multiple responses.

3.8.2. Data Analysis for the Qualitative Part of the Study

The qualitative data were analyzed following the steps suggested by Creswell (2007). Accordingly, the in-depth interviews were organized based on the characteristics of the interviewees (e.g., clubs, adolescents, coaches,). Then the in-depth interviews were transcribed verbatim, in Amharic language. Next, the interviews were translated into English language. After this, the data were read thoroughly to have some insight into the general picture of the situation. Then, coding was done. Significant quotes from interviewees were highlighted and codes were created by grouping similar ideas together. Codes with similar nature were also further grouped together into categories. These categories finally helped to identify fewer themes and patterns. For example, in the case of the benefits of TKD, six themes were identified. Regarding the problems of TKD, four themes were identified). Then, themes and patterns were presented in discussion format. And, finally, these results were interpreted in relation to theories, other research findings and my personal experience.

3.8.3. Presentation of Data

The data gained from the quantitative and qualitative methods were presented and discussed in an integrated manner. This helped to compare and contrast specific findings regarding each objective of the study, at the same spot.

Table 2: Summary of Methodological Triangulation

Units of Analysis (Information on What?)	Observation Units (Information from Whom?)	Methods of Data Collection and Analysis (How Collect and Analyze Information?)
Nature of the TKD training	A. Instructors of TKD	A. In-depth Interview Qualitative analysis
Benefits of TKD training for the well-being of adolescents	A. TKD Adolescent B. Instructors of TKD	A. Questionnaire and in-depth interview B. In-depth interview Quantitative and Qualitative analysis
Problems in relation to TKD training and TKD adolescents' well-being	A. TKD Adolescent B. Instructors of TKD	A. Questionnaire and in-depth interview B. In-depth interview Qualitative and quantitative analysis
TKD adolescents' level of SWB	A. TKD Adolescents	A. Questionnaire (PWI-SC) Quantitative analysis (point and interval estimation)
Comparison within TKD adolescents based on SWB	A. TKD Adolescents	A. Questionnaire (PWI-SC) Quantitative analysis (one way ANOVA)

3.9. Validity, Reliability, and Trustworthiness

As a mixed methods research, this study attempted to secure reliability and validity for the quantitative part of the study and trustworthiness for the qualitative one. Reliability and validity for the quantitative measure (the psychometric properties of the PWI-SC) is already discussed in the measurement sub-section. It was showed that the scale has acceptable

psychometric properties like construct and convergent validity and internal and test-retest reliability. In addition, this scale was used in different cultures (both in individualistic and collectivist) and it retained its acceptable psychometric properties. However, it had not been used in Ethiopia before this study. Therefore, some efforts were made to secure its validity.

Accordingly, the scale was checked for content validity and cultural issues by my advisor and my colleagues from psychology and sociology backgrounds. In addition, its double translation was done by other colleagues from psychology and English language backgrounds. To see whether adolescents in Ethiopia understand the questions in this scale, I also made some five adolescents respond to it. These adolescents easily understood it and responded.

I was unable to conduct a pilot study to see the reliability of the scale because of a number of difficulties like difficulty of getting TKD adolescents and lack of time and finance. It is also important to note that the minimum sample size for checking internal validity is recommended to be 200 – 500 (Yurdugül, 2008).

Nevertheless, after the data was collected, acceptable degree of internal consistency was found for this scale, using Cronbach's alpha internal consistency reliability ($\alpha = .652$) and mean inter-item correlation (.213). According to Clark and Watson (1995) cited in Neuendorf (n.d.), there have been lack of clear standards regarding the acceptable level of Cronbach's alpha, recommended levels ranging from .60 to .80 or .90. It is also claimed that Cronbach's alpha is influenced by the number of items in the scale, small number of items lowering alpha coefficients and vice versa. In this case, it is recommended to judge internal consistency using mean inter-item correlation instead of Cronbach's alpha (Neuendorf, n.d.). The scale used in this study (PWI-SC) is a 7-items scale and this is a small number of items. Briggs and Cheek (1986), cited in Neuendorf (n.d.), recommend the acceptable mean inter-item correlation to be between

.20 and .40. Similarly, Clark and Watson (1995), cited in Neuendorf (n.d.) specified the acceptable mean inter-item correlation in the range .15 to .50.

Attempts were also made to assure the trustworthiness of the qualitative data. First, peer review of the guiding questions of the interview was made with some of my class-mates and corrections were done accordingly. I also created good rapport with the participants of the study so that they would give genuine answers. There were also instances by which I met some participants again for clarification of their responses. The data collected from the interviewees was also read by some of my class-mates to see its trustworthiness. In addition when, the data was presented, divergent ideas of participants were quoted. Given my experience in the martial arts, I also had to try to be conscious of my biases and view points (I tend to favor traditional martial arts). It is also important to note that different types of triangulations were used in this study, for example, methodological triangulation and triangulation of instruments of data collection (i.e., questionnaires and in-depth interviews) and triangulation of data from different interviewees (i.e., TKD adolescents and coaches).

3.10. Ethical Consideration

“For every social work researcher, the core values of the social work profession remain constant standards against which decisions are measured” (Lyons & Doueck, 2010, p.82). The core values of social work, as identified by NASW (n.d.), include: service, social justice, dignity and worth of the person, importance of human relationships, integrity, and competence. Lyons and Doueck (2010) assert that the core values of social work are in alignment with the ethics of professional research, for example, with the principles of Belmont report which underscores: respect for a person, beneficence, and justice.

In this research, I attempted to make sure that the ethics of both the profession of social work and professional research are followed and study participants are protected. Accordingly, the following important points were given attention: informed consent/assent/permission at different levels; anonymity of participants; confidentiality of information given by participants; and avoidance of possible harm to participants as a result of participating in the study.

Permission and consent to conduct the study and to collect data was sought at different levels from different parties. The first was from the AAU's School of social work that reviewed the proposal of this study for approval. The second level of permission was gained from each TKD club selected for this study. And, finally, each individual participant was asked for his or her informed consent/assent.

The nature and purpose of the study was explained at all levels of permission before consent/assent was secured. In relation to this, I made clear to participants the level of harm or discomfort that this research may cause to participants. I strongly believe that this study does not contain very sensitive issues that may harm or cause problems to the adolescents or their instructors. The potential risk of participating in this study was limited to some discomfort as adolescents were asked how happy they were with the different domains of their SWB. In addition, the issue of anonymity and confidentiality was assured for both the clubs/school and adolescents. In this case, I assured participants that I would never use any identifiable information of them. To do so, participants were not asked to write or tell their names in the questionnaire or in the interview. In addition, I used pseudonyms/ code numbers to present the finding. Furthermore, the researcher assured participants that the findings of this study would be used only for academic and professional purpose. Participants were also told that they could withdraw from the study anytime they want.

All these were done through consent/assent forms that were prepared for this purpose. Consent/assent forms were prepared for TKD clubs/head instructors and TKD and non-TKD adolescents (see appendices). The consent forms for the TKD clubs/head instructors enabled me to get both permission of the clubs to have their students participate in this study (as gate keepers and adult guardians) and to collect data from the head instructors themselves as participants. In the case of adolescents, assent forms were presented in two different forms. For those who responded to the questionnaire, the assent forms were presented on the cover letter of the questionnaire. And, they were informed to show their assent by filling in the questionnaire. In the case of the in-depth interviews, a separate written assent form that should be signed was presented for the participants. However, most of them preferred to give oral assent after I read them what was written on the form.

Chapter Four: Results and Discussion

4.1. Results of the Study

This section presents the results of the study. The quantitative and qualitative findings of this study are presented in five sub-sections. The first sub-section provides some background information on the participants of the study. The second sub-section addresses the nature of TKD training provided for the adolescent practitioners of TKD. The third sub-section deals with TKD adolescents' and coaches' perception of the benefits of TKD for the well-being of adolescents. The fourth sub-section presents findings regarding estimation of TKD adolescents SWB and comparison within TKD adolescents based on their level of SWB. Finally, the last sub-section presents TKD adolescents' and coaches' perception of the problems associated with practicing TKD.

4.1.1. Background Information on Participants of the Study

This study had a total of 120 participants from four clubs of TKD in Addis Ababa. The quantitative part of this study had 108 adolescent respondents. The qualitative part of this study had eight TKD adolescents and four coaches as participants. In this section, background information like age, sex, and belt levels of participants are provided.

Table 3. Belt Levels of TKD Adolescent Respondents

Belt Categories	Frequency	Percent
Lower level belts (white, yellow, and green belts)	54	50.9
Middle level belts (blue and brown belts)	26	24.5
High level belts (red, black, first Dan, and second Dan belts)	26	24.5
Total	106	100.0

TKD adolescent respondents were of different belt rankings. As shown in table three, out of 106 TKD adolescent respondents who indicated their belt levels, majority of them, 54

(50.9%), were found in the lower belt category. And, the rest of them were found, in equal amount, in the middle and higher level belt categories, 26 (24.5 %) for each.

Table 4. Sex of Respondents by their Belt Level

			Belt Level of Respondents			Total
			Lower level	Middle level	Higher level	
Sex of respondents	Female	Count	27	10	12	49
		% within belt Level	50.0%	38.5%	46.2%	46.2%
	Male	Count	27	16	14	57
		% within belt Level	50.0%	61.5%	53.8%	53.8%
Total		Count	54	26	26	106
		% within belt Level	100.0%	100.0%	100.0%	100.0%

As shown in table four, out of the 106 TKD adolescent respondents, 57 (53.8 %) were males while 49 (46.2%) were females. Specifically looking at each belt level, the proportion of females decreased as belt level increased. In the lower belt level, males and females had equal number, 27 (50%) each. In the middle belt level, the number of females was 10 (38.5%) while the number of males was 16 (61.5%). In the higher belt category, the number of females was 12 (46.2%) while the number of males was 14 (53.8%).

Table 5. Age of Respondents in different Belt Levels

Belt Level of Respondents	N	Mean	Std. Deviation
Lower level belt	53	14.09	1.86
middle level belt	26	14.92	1.99
High level belt	23	15.17	1.75
Total	102	14.55	1.917

In the case of respondents' age, as shown in table five, the ages of respondents in different belt categories are slightly different. The mean age of respondents increased from lower

level belt ($M = 14.09$, $SD = 1.86$) to middle level belt ($M = 14.92$, $SD = 1.99$) and higher level belt ($M = 15.17$, $SD = 1.75$).

Table 6: Characteristics of TKD Adolescent Interviewees

Characteristics	TKD Adolescent Interviewees							
	1	2	3	4	5	6	7	8
Sex	Female	Female	Male	Female	Male	Female	Male	Female
Age	14	12	15	15	13	18	16	15
Belt level	1 st Dan	Red belt	Blue	Blue	Green	Brown	1 st Dan	Blue
Competition	No	No	No	No	No	No	Yes	No
Club	A	A	B	B	C	C	D	D

Table five indicates that of the eight TKD adolescent interviewees, five were females and three were males. The ages of the adolescents were diverse, ranging from 12-18, with a mean age of 14.7. The belt levels of the adolescents included first Dan black belts and all color belts except white and yellow belts. Of the eight TKD adolescents, only one of them participated in fight competitions.

Table 7: Characteristics of TKD Coach Interviewees

Characteristics	TKD Coaches			
	Club A's	Club B's	Club C's	Club D's
Sex	Male	Male	Male	Male
Age	31	28	28	29
Belt level	3 rd Dan	4 th Dan	3 rd Dan	3 rd Dan
Years as trainer	13.5	8	10	8
Training in other martial arts	No	Yes (Jujutsu)	Yes (boxing, Kung Fu, ITF, Dakai'to Ryu)	No

As shown in table six, all of the coach interviewees were males. Their ages were close to each other; the age range was 28-31. Their belt levels were also similar. Except club B's coach who had a 4th degree black belt, all of them had 3rd degree black belt. The coaches also had trained students for 8 - 13.5 years. Finally, while two of the coaches had experiences in other martial arts, the rest two had no exposure to other martial arts.

4.1.2. The Nature of Taekwondo Training Provided for Adolescents

Based on my observations and interviews with TKD coaches, I have come to conclude that the nature of TKD training provided for the adolescents in the four clubs is largely similar. And, it could be summarized in terms of the process of registration and expenses by parents/ adolescents, community services by the clubs, facilities of the gyms, frequency and hours of training, components of the training of TKD, and TKD competition. Though these points are not exhaustive, they provide some insight into the context in which the adolescents practice TKD.

Registration and expenses. After adolescents or their parents have decided that the adolescents should join the TKD training, the next thing done is getting the adolescent registered for the training and making them members of TKD clubs. In this case, there are some expenses that should be covered by the adolescents or their families. The first expense is that of registration fee and paying the first monthly membership fee. For example, in club D the registration fee is 20 birr per new student. Monthly membership fees for adolescents in the four participant clubs range from 50 birr per month (in club B) to 80 birr per month (in the rest of the clubs). Monthly membership fees for adults are usually higher, for example 100 birr per month in club C and D. Students are also expected to have and wear the white TKD uniform, in the training. The uniform of TKD could cost students/their families some 350 birr. However, new students are not usually required to have uniforms immediately after registration. In the case of

belt promotion/graduation, students are also required to pay different amounts of money for different belt levels and their corresponding certificates. For example, in club A, the payment ranges from 150 birr (when passing to yellow belt) to 450 birr (when passing to second Dan/degree black belt).

Based on the above result, it could be assumed that adolescents who join the TKD training are the ones who can afford to cover the different expenses the training requires. However, this is not always the case; all the TKD clubs in this study engaged in community service activities whereby they train some students for free.

Community service. It was noted that all of the participant clubs of the study participate in a community service. This community service had been given in two major ways. One way is by training some students for free, in their regular training. It was noted that all of the four clubs had some students whom the coaches do not require to pay anything for the abovementioned expenses, because the students and their families were unable to do so. In this case, for example, club B's coach said, "I train many for free as they are not able to pay. The parents of the kids come and ask me. I live around here and I know their status, the kind of job they do. When they ask me, I say 'no problem' and I train their kids" (31/5/2014).

The second way of giving community service is associated with summer time voluntarism, in which all the four clubs train children and adolescents for free. Club C's coach said, "My club gives a kind of community service in Arada sub-city. During summer time, we select some 20 girls and teach them self-defense" (2/6/2014). I believe that this practice of community service by the TKD clubs is something that should be encouraged as it gives adolescents who cannot afford to pay for the training a chance to practice TKD.

Gym facilities. The gyms of the four clubs differed, among other things, in terms of availability of facilities like toilet, shower, mats, and space for training. These facilities are very important since they contribute to the comfort and well-being of the trainees. The facility of toilet was available in three of the clubs (A, B, and D). Shower was available only in two of the clubs (A and B). Three of the clubs (A, B, and C) had some kinds of mats to cover the floors of the gyms. The mat in club B was the best of all since it is a kind of mat used in TKD competitions (it is thicker). There was no mat in club C, the floor of the club was of timber. In the case of space available for the training, club B and C, had huge spaces that allow many (approximately up to 50 – 70) adolescents freely practice at a time. The spaces of the gyms of club A and D were narrower and could allow for some 15 to 25 students at a time.

Frequency and hours of training for adolescents. In all clubs, usually children and adolescents went to their clubs' gyms and practiced TKD three days per week – Friday (in the afternoon, after school), Saturday, and Sunday. These three days were chosen for practice in order to engage adolescents in TKD during their free time and thereby enable them to give more emphasize to their education. In the case of hours of training, each session of the training usually took one and half hours with breaks in between exercises. In relation to this, it is noted that in all clubs there were efforts to provide the trainings based on the age of trainees. In three of the clubs (A, C, and D), trainees below the age of 18 were trained separately from adults who were above 18 years. A more compartmentalized training was found in club B where there were separate training schedules for trainees in the age categories of 8-12, 13-16, 16-18, and >18.

Components of the training of Taekwondo. There were different components of the TKD training identified by the coaches of TKD. These components include Warming up (stretching, running, etc) exercises; fitness/strength exercises; techniques of TKD (stances,

blocking techniques, and kicking and punching techniques with and without pads); sparring/fight trainings for competition; form/pattern practices; breaking; meditation and breathing; philosophy and ethics of TKD; self-defense, and trainings for demonstration/graduation ceremonies.

Though there were many components of the training of TKD, all of the coaches agreed that most of the focus of their training of TKD was directed at sparring/fight trainings, followed by form/pattern training. Here, it is important to note that warming up exercises (stretching, running, etc), fitness/strength exercises, and techniques of TKD are inseparable parts of both the sparring/fight trainings and form/pattern practices. According to all the instructors, the reason for the too much attention given to sparring/fight training is that world TKD is now a very popular competitive sport that has competitions at local (club, school, sub-city), national (all Ethiopian games), continental (all African games), and international (e.g., Olympic) levels.

In relation to this, all coaches said that their clubs and students had been participating in competitions. All instructors also claimed that form/pattern practice was given second-place emphasis because it did not have any national competition, but mainly used for the sake of promotion tests as it was a major part of the promotion test both at national and international levels. Club C's coach describes this situation:

In our club, the inclination is toward sparring. The main reason for this is that, these days all the TKD competition in Ethiopia is of sparring. Formerly, TKD form competitions were being held. Now, there is no form competition because there is no uniformity in terms of TKD forms among the clubs of TKD in Ethiopia. ...The only way to compete in TKD is *Kyorugi* (sparring). Because of this, most clubs in Ethiopia emphasize *Kyorugi*. Had there been form competitions, we would have emphasized the training of forms (2/6/2014).

There was also unanimity among the four clubs on other three points. The first is that when the kicking and punching techniques are compared, most of the emphasis was placed on the kicking ones. In other words, club A's coach put it, "...90% or 80% of what we do is with legs; ...the remaining 20% are techniques done with hands" (14/5/2014). The second point is that the clubs prepared for and presented demonstration shows usually once a year for the purpose of graduation ceremonies. Activities for graduation ceremonies included among other things, demonstration of forms, breaking (e.g., timber), and self-defense and/or choreographed fights. The third point is that breaking trainings were not considered as a major component of the training of TKD, but as trainings only done during preparation times for demonstration.

In the case of other components of TKD training, different coaches differed in terms of giving different degrees of attention. With regard to meditation and breathing, two of the coaches (in club A and D) said that meditation and related breathing exercises are non-existent in their club, while the rest two (club B and C) claimed that it was given to a limited degree. In club B it was claimed to be practiced once in a month among the highest belt holders. In club C, the coach said there was no serious and regular meditation for colour belts (belts below black), but simple breathing exercises.

In case of the philosophies and ethics of TKD, it was evident that in all the four clubs there was no regular or formal lecturing of the philosophy of TKD (in relation to the interaction of humans and nature, the presence of opposing forces in the universe, and the need for balance in universe, etc). However, ethical principles were somewhat taught. The rules of conduct in the gym were clearly understood by trainees in all clubs, over time, in one way or in another (for example, by lectures of the coach, notices posted on walls, by observation of the behavior of the coach and other senior students, and by asking other senior students). These rules covered the

students' behavior starting from entering the gym to leaving the gym, in every training session. Some of the rules include: taking off one's shoes before entering the gym, respecting and obeying the coach and other senior students, and salutation to the gym, the flags (of Korea and Ethiopia), the coach, and other students.

Aside the above specific behavioral codes in the gym, in terms of seriously lecturing the ethics of TKD, it seems that only two of the clubs (club B and D) gave more emphasis to it while the rest (club A and C) did it in a less organized manner or irregularly. In club B, the coach said he taught the 11 ethical principles of TKD once a week (every Saturday), at the end of the day's training session. In club D, the coach claimed that he taught the principles of TKD (like love, truth/honesty, loyalty, personal hygiene, respecting others, discipline, etc) every time he got the chance. In addition, the researcher was able to observe what is called the 'golden principle' of many of the major religions and philosophies of the world, i.e., "do not do unto others what you don't want to be done unto you" posted on one side of the walls of the gym.

In the case of self-defense trainings, in two of the clubs (club A and D), no separate self-defense trainings were provided for the adolescents, but all the training of TKD (including sparring and forms) were considered to enable students defend themselves. In the other two clubs (club B and C), specific self-defense techniques (other than sparring and forms) were taught for students. However, they were not emphasized as much as sparring and forms; they were taught some times and irregularly. Here it is important to note that the clubs which provide some sort of self-defense training were the ones whose coaches had exposure to other martial arts.

From the above presentation of results, we can see significant similarities among the TKD clubs in terms of the aspects of training they emphasized. Most of the training of TKD was

concentrated on sparring and little attention was given to pattern practices, self-defense, meditation, philosophies and ethics of TKD, and breaking exercises.

Taekwondo sparring competition. It has been noted that TKD is a popular competitive sport and competitions have been held at local, national, continental, and international levels. All of the four clubs have participated in TKD fight competitions at local or national levels.

In Ethiopia, TKD competitions are based on mainly three criteria or categories, i.e., sex, age, and weight categories. Competitors within the same sex and age category are matched based on weight. There are three different age categories. These categories are: adult category (>18 years), under 17 (16-17 years), and under 15 (14-15 years). Competition in the adult category existed for longer time. However, the under 17 competition was started recently and the under 15 competition was about to be started for the first time when data was collected for this study (it was scheduled to be held in July 2014). Another thing learned is that the government of the country has recently set up a project or a training academy to train adolescents (under 17 years-old) for competitions in different sports, including TKD.

4.1.3. Taekwondo Adolescents' and Coaches' Perception of the Benefits of TKD for Adolescents

This study attempted to understand the perception of TKD adolescents and coaches about the benefits of TKD for adolescents. All participants were allowed to give multiple responses for the question regarding the benefits of TKD. Accordingly, six themes were identified. These themes are: social benefits, physical benefits, mental benefits, self-defense, addiction avoidance, and other benefits. Within each theme, participants mentioned specific benefits. For example, social benefits include: good social relations, more friends, sociability, and prosocial behaviors like respecting others and getting respect, good attitude toward others, discipline, obedience,

patience, and etc. Physical benefits include: disease prevention, vitality, speed, strength, muscle, physical appearance, endurance, and etc. Mental benefits involve: self-confidence, mental satisfaction, improved thinking and reasoning, wisdom, courage, happiness, sense of freedom, self-awareness, and etc. Addiction avoidance includes: distancing oneself from abusing substances and unnecessary places that lead to substance abuse. Other benefits involve: improvement in education, competition in fight, new skills, opportunity to teach, and etc.

Table 8: TKD Adolescents' Perception of the Benefits of TKD

Adolescents' perception of the benefit of TKD	Responses	
	N	% of Cases
Mental benefits	54	50.5%
Self-defense	29	27.1%
Physical benefits	55	51.4%
Addiction avoidance	7	6.5%
Social benefits	57	53.3%
Other benefits	21	19.6%
Total	223	208.4%

The quantitative part of the study used a multiple response set technique to compute frequency distributions and percentages for adolescents' perception. Of the total 108 TKD adolescents, 107 gave their answers for this question. In this case, as shown in table 7, the number of responses is 223. This increased the percent of cases (respondents) from 100 to 208.4. Put in order of importance, the responses of the adolescents are: social benefits, by 53.3% of the respondents; physical benefits, by 51.4% of the respondents; mental benefits, by 50.5% of the respondents; self-defense, by 27.1% of the respondents; other benefits by 19.6% of the respondents; and addiction avoidance, by 6.5% of the respondents.

A similar pattern of response is also found among the responses of the eight adolescent participants in the interview. The most frequently mentioned themes, in the interview are: social benefits, by five students; physical benefit, by five students; mental benefits, by three students;

self-defense, by two students; and other benefits (knowing TKD), by one student. Addiction avoidance was not mentioned by participants. In the case of social benefits, one of the male interviewee said:

To tell you the truth, I was a very difficult boy. Even when people drank coffee at our house, I used to disturb them. But, now I am improved. My family members tell me that my behavior is improved. They tell me not to quit TKD...It is just TKD itself [What contributed for this change]. And, I have special place for my master; it is his influence (Interviewee 3, 31/5/2014).

Most of the interviewee adolescents mentioned more than one benefits of TKD for their well-being. For example, interviewee six (female) said, "It increased my self-confidence; it made me happy; it improved my health; and it enabled me to have a good physical appearance/shape" (7/6/2014). Another female adolescent also claimed:

I have got many benefits. For example, before I started TKD, the boys in my school used to hit me. But now, I am able to defend myself...In addition to self-defense, I have come to have a better discipline or behavior. Formerly, I used to insult other people, but now I have come to be calm... (Interviewee 2, 8/6/2014).

When we come to the coaches' perception of the benefits of TKD for adolescents, we find some different patterns of response. The first difference is in the order of frequently mentioned themes. Three themes, i.e., addiction avoidance (preventing substance abuse), physical benefits (health, muscle, strength, and fitness), and mental benefits (courage, alertness, mental wellbeing, concentration, etc) were mentioned more frequently, by three coaches. Social benefit (discipline, obedience, and respecting others) was mentioned only by two coaches. Other

benefit (contribution for education) was also mentioned by one coach. The other difference is regarding self-defense. Surprisingly, self-defense is not mentioned at all by the four coaches.

Regarding the benefits of TKD for adolescents, club C's coach's assertion summarizes the coaches' perception of the major benefits of TKD for adolescents.

I can mention a lot of benefits of TKD for adolescents, if we like. It improves their consciousness and alertness. This in turn contributes for their education - to study effectively, concentrate, etc... The benefit of TKD and any other sport for health is obvious... I have seen many adolescents who were previously unable to eat well, change and start eating. There is also one unique adolescent, who came to the club some 5 years ago and who was unable to walk normally because his heels didn't touch the ground. He was advised by a physician to do sports like TKD. Today, this adolescent walks normally like other adolescents... TKD is also important for this generation in terms of teaching them discipline and respect...it also protects them from exposure to drug addiction. Every neighborhood you go, almost all adolescents smoke cigarette and chew chat. But when they join TKD training, they won't do so. Those who begin doing TKD earlier will not be exposed to such addictions... (2/6/2014).

As it can be understood from the above presentations, social, physical, and mental benefits are the three most frequently mentioned responses by adolescents and they have close frequencies. Meanwhile, given TKD is a martial art, it is surprising to learn that self-defense is not frequently mentioned as a benefit of TKD. This situation might be attributed to three causes. One is that self-defense is not mentioned frequently by the adolescents and their coaches because its contribution for adolescents is too obvious to tell. The second reason could be that, in fact, the

primary benefits gained from TKD are other than self-defense. And, finally, it may be a reflection of the low level of emphasis given to self-defense in the participant clubs.

4.1.4. Taekwondo Adolescents' Level of SWB and Comparisons of Adolescents based on their SWB (PWI-SC) Scores

The quantitative part of this study has also attempted to answer two major questions regarding the SWB of TKD adolescents, using the PWI-SC. The first question sought to determine TKD adolescents' level of SWB. The second question asked whether all TKD adolescents had the same level of SWB. In this case, TKD adolescents were categorized into three different belt levels, after consulting TKD coaches. These belt levels are: lower level belt (white, yellow, and green belts), middle level belt (blue and brown belts), and higher level belt (red belt- 2nd Dan black belt). One factor independent measures ANOVA was used here to do the comparison.

Table 9. Point and Interval Estimation of TKD Adolescents' Mean Points of PWI-SC

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Lower level belts	43	83.89	10.20	1.56	80.75	87.03
Middle level belts	19	80.38	11.25	2.58	74.95	85.79
Higher level belts	22	79.55	9.53	2.03	75.32	83.77
Total	84	81.96	10.35	1.13	79.71	84.20

Table 10. ANOVA Result of the Three Groups of TKD Adolescents based on their Mean Points of PWI-SC

	ANOVA				
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	335.61	2	167.80	1.59	.21
Within Groups	8557.36	81	105.65		
Total	8892.98	83			

The result of the ANOVA came up with two important findings, as presented in table eight and nine. The first finding showed the TKD adolescents' level of SWB, as measured by the PWI-SC. Accordingly, the TKD adolescents' mean point was found to be 81.95 (95%CI: 79.70 to 84.20). Therefore, it can be said that TKD adolescents had high mean points of PWI-SC or high level of SWB. However this does not tell the whole story. The next logical thing, i.e., comparing TKD adolescents of different belt rankings, is need to be done here. The second important finding showed that there was no significant difference in SWB scores between TKD adolescents with different belt rankings, $F(2, 81) = 1.58, p > .05$. Lower level belts ($M = 83.88, SD = 10.20$), middle level belts ($M = 80.37, SD = 11.24$), and higher level belts ($M = 79.54, SD = 9.53$) did not differ on their mean points of PWI-SC. This finding indicates that all TKD adolescents have the same level of SWB regardless of whether they are beginners or most advanced.

4.1.5. Adolescents' Problems Associated with Practicing Taekwondo

The problems associated with practicing TKD are presented in two parts. The first part deals with TKD adolescents' and coaches' perception of the problems associated with practicing TKD, for adolescents. And, the second part presents TKD sparring competition related problems.

4.1.5.1. Taekwondo adolescents' and coaches' perception of Adolescents' problems associated with practicing Taekwondo. In both the qualitative and quantitative parts of this study, attempts were made to understand the perception of TKD adolescents and coaches about the problems of practicing TKD on adolescents. All participants were allowed to give multiple responses for the question concerned with the problems of TKD. As a result, four themes were identified. These themes are: family-related problems, injury, community-related problems, and

miscellaneous problems. There were also a large number of adolescents who claimed they faced no problem.

Various specific problems were mentioned in each of the themes identified. For instance, family-related problems include: lack of awareness, lack of money to cover expenses, and disagreements with parents who tell their adolescents to quit training for various reasons, especially to emphasize education. Community-related problems include: negative attitude toward martial arts, provocation by peers (mocking, challenging to fight, insulting), fearing practitioners, and etc. Injuries that are mentioned by respondent are mostly simple and include: leg injuries, bumps, bruises, muscle strains and etc. Miscellaneous problems involve: busy schedule of adolescents, lack of TKD materials, far distance from home to clubs, and etc.

The quantitative part of the study used a multiple response set technique to compute frequency distributions and percentages for adolescents' perception of the problems they encountered as a result of participating in TKD. Of the total 108 TKD adolescents, 99 gave their answers for this question. In this case, as shown in table 11 below, the number of responses is 103. This increased the percent of cases from 100 to 104.

Table 11. TKD Adolescents' Perception of the Problems of TKD

Adolescents' perception of problems of TKD	Responses	
	N	% of Cases
Family-related problems	17	17.2%
Injury	7	7.1%
Community-related problems	8	8.1%
Miscellaneous problems	8	8.1%
No problem	63	63.6%
Total	103	104.0%

As it can be learned from table 11, majority 63.6% of the respondents said they did not face any problem as a result of TKD. This means, the rest, 40.4%, experienced various problems.

three coaches. Within this theme, two specific issues were mentioned repeatedly, i.e., provocation (e.g., insult) by peers and incorrect societal attitude toward TKD (e.g., considering it as fighting or violent art and believing that it is dangerous for female virginity). Talking about provocation, club A's coach said, "they provoke my students saying... 'stone also has a black belt' or 'for those who wear TKD black belts, we also have black stones'..." (14/05/2014). This coach also underlines that such problem usually occur to students below the age of 18 years. Besides community-related problems, two miscellaneous problems were also mentioned by the coaches, i.e., lack of facilities (like shower) and diet related problems (e.g., lack of sufficient diet). Regarding diet, club D's coach asserted:

When a person does sport, there are many things that should be fulfilled. The food a normal sportsman eats should be different from others. The main problem is this thing. The families prepare food in their capacity...there are also easy things affordable by most people, like boiled potato or corn bought from the sides of the streets. But, would that be balanced diet? Would it help? If balanced diet cannot be secured, the kid might get overly skinny and this might have an impact on growth (25/5/2014).

One of the coaches also argued that what determines whether TKD has negative effect or not (especially regarding education) is the role of the coach:

As I already told you, the students respect and fear you [the coach] more than they respect and fear their parents. There could be ways by which you, as a coach, could hurt them. If you always require them to focus only on the TKD training, increasing the intensity of the training, they will perform low in their education. The best thing to do is, you have to put some restriction on their training and encourage them to focus not only on TKD but also on their education (club C's coach, 2/06/2014).

This same coach also comments on societal attitude toward female adolescent TKD practitioners.

Like in other aspects of a society's life, female students of martial arts are victims of discrimination. For example, one reason why parents do not send their female children to the martial arts training is associated with losing virginity, as a result of doing flexing exercises like splits. People in the society commonly think like this (club C's coach, 2/06/2014).

4.1.5.2. Problems in relation to TKD Competition. It seems that there are various ways by which TKD competition in Ethiopia could negatively influence the well-being of adolescent competitors. These ways could be summarized as: adolescents competing in adult categories, poor infrastructure in TKD competitions, injuries, and unhealthy weight management.

In spite of the presence of different age categories, all of the coaches have admitted that they entered adolescents below 18 years in the adult category of sparring competitions. For instance, club A and D, entered adolescents as young as 16 years, club B entered adolescent as young as 15, and club C entered adolescents as young as 17 years. The coaches reasoned that they did so because they knew their students' capacities in terms of biology (muscle and bone strength) and skill (technique, speed, etc). Similarly, while holding a black belt is the minimum requirement for participating in adult category, except club A, all others entered students below the rank of black belt (including adolescents). The same reasoning is applied here by the coaches.

The poor infrastructure of TKD competition in Ethiopia, as club C's coach claimed, can be understood in terms of: poor quality of protection equipment, absence of trained physicians, and absence of ambulance during competitions. According to club C's coach, excepting the

highest national level competitions, these problems are commonplace in Ethiopia. He described the protection equipment as either “outdated” or “forged” and unable to sufficiently protect athletes from injuries. He also said that in all local competitions he watched, there were no physicians assigned. Instead of physicians, physiotherapists of soccer players were there, being paid 50-100 birr per day. With regard to ambulance service, he said, “What has been done during this kind of situation is that we just ask for the help of individuals who have cars and take the injured athlete to a hospital” (2/6/2014).

Unhealthy weight management could be understood as an athlete’s effort to lose or gain weight within a short period of time. An athlete may do so for the sake of being fit into a particular weight category which is either his/her true weight category or another category supposed to be advantageous to win. According to the coaches, the practice of rapid weight reduction was more prevalent than rapid weight gain. These practices had been performed by all clubs. Here, note that club A’s coach claimed such practices did not happen at his club, but some of the adolescent respondents in his club reported the opposite. Two of the coaches reasoned that the main reason for unhealthy weight management to happen is that students did not listen to their coaches or they did not get always ready.

Despite all the above-mentioned undesirable situations surrounding sparring competitions, all the coaches/clubs reported that there had never been any serious injury on their athletes. This does not mean that TKD competitions were without injuries. All of the coaches agreed that minor injuries (like bruises and bumps) were inevitable in competition since TKD is a full contact sport. Nevertheless, two of the coaches said that their athletes caused serious injuries to other clubs’ athletes. In relation to the poor infrastructure of TKD competitions, club

C's coaches said that serious injuries usually did not occur as a matter of luck rather than any other reason (2/6/2014).

TKD adolescent participants of this study (both in the quantitative and qualitative parts) were also asked whether they had ever participated in TKD competitions and whether they got injured and whether they unhealthily managed their weight.

Of the eight TKD adolescents who participated in the interviews, only one of them said he had participated in a competition. This trainee also said that he did not face any major injury. But, though he did not see it as a problem, he said he made an effort to reduce his weight so that he could fit into a particular weight category.

I had reduced my weight. I did so by wearing a plastic [inside his cloths] and doing exercises like running and other footwork exercises. I began doing so 15 days before the competition. And, I did it every day till the time of weigh-in, which was at the eve of the competition. And, I achieved it. I lost 7 kilos. I normally gain weight easily, that is why I had to lose all these 7 kilos (interviewee 7, 14/6/2014).

When we see the quantitative results (see table 12, below), it is evident that majority of the respondents said they did not participate in fight competitions. As it can be understood from table 12, of the 106 adolescents who answered this question properly, 27 (25.5%) participated in fight competition and the rest, 79 (74.5%) did not.

Table 12. TKD Adolescents Participation in TKD Fight Competitions

Response	Frequency	Percent
Did not participate	79	74.5
Participated	27	25.5
Total	106	100.0

Those adolescents who said they participated in fight competitions (N=27) were further asked to tell whether they experienced injuries as a result of the competitions. Twenty six of them answered this question. As shown in table 13, below, most of them 16 (61.5%) did not experience injuries while 10 (38.5 %) experienced injuries.

Table 13. TKD Adolescents Experience of Injury in TKD Fight Competitions

Response	Frequency	Percent
Did not experience	16	61.5
Experienced	10	38.5
Total	26	100.0

These same respondent who said they participated in fight competitions (N=27) were also further asked to tell whether they rapidly lost or gained weight for competition purpose. Twenty four of them answered this question. As it can be seen in table 14, below, majority of them, 18 (75%), experienced unhealthy weight management while the rest, 6 (25%), did not.

Table 14. TKD Adolescents Experience of Rapid Weight Loss or gain for Competition

Response	Frequency	Percent
Did not experience	6	25.0
Experienced	18	75.0
Total	24	100.0

From the above results, it can be understood that $\frac{1}{4}$ of the respondents participated in TKD fight competitions. And, both unhealthy weight management and injuries were experienced by athletes to varying degrees, the former being more common.

4.2. Discussion

In this section, the major findings of the study are discussed in relation to the literature, the conceptual framework used in this study, and my personal reflections or interpretations. The overall purpose of this study was to investigate the role of TKD training on the well-being of adolescent practitioners of TKD. To do so, efforts were made not only to address the issue of well-being (like identifying benefits and problems of TKD and determining SWB and comparing adolescents on SWB), but also to provide some background insights into the situation of the TKD training (nature of the training), to help readers have a comprehensive picture of the situation.

4.2.1. The Nature of TKD Training

In this sub-section, I would like to emphasize two specific findings. The first is about the gender gap in World TKD and the second is about the components of the training of TKD. The gender gap in World TKD can be seen from two directions. One is in light of TKD adolescents and the other is in the case of TKD coaches. Of the 108 TKD adolescent respondents in this study, 57 (53.8 %) were males while 49 (46.2%) were females (see Table 4). These figures do tell us that the number of female adolescents who participate in TKD is almost equal with that of male adolescents'. Observing this kind of a very narrow gender gap in a developing country where women are not encouraged to participate in activities outside of home is really encouraging and it may be indicative of the narrowing gender gap in other spheres like primary education.

Nevertheless, the gender gap remains very wide when it comes to TKD coaches. All of the coaches of the four participant TKD clubs in this study were males. In addition, there was no female coach of TKD on the list of registered world TKD clubs by the Addis Ababa Sport

Federation. I have heard of only one female coach of World TKD in Addis Ababa. This situation may indicate that, like in other aspects of society e.g., education and work, the number of women in TKD decreases as the level of TKD increases.

In the case of the components of the TKD training, it is essential to identify the different aspects of the training and learn which aspects are emphasized more by coaches. Doing so helps, among others, to determine whether the training is more of traditional or modern/sport TKD. This in turn is important because there are controversies regarding which type of martial arts is better for well-being. In this case, traditional martial arts are usually considered better (see Binder, 2007; Nosanchuk & MacNeil, 1989; Trulson, 1986).

TKD has different components of its training. Generally, the different aspects of its training include: warming up and stretching exercises, physical fitness exercises, techniques of TKD (stances, kicking, blocking, and punching); meditation and breathing, philosophy and ethical principles, form/pattern/kata trainings, self-defense trainings, sparring/fight training, and breaking techniques (Park, et al, 2009; Tausk, 2001; Trulson, 1986). Almost of the components of TKD mentioned above were identified in this study to be integral parts of the training of TKD in Addis Ababa, Ethiopia.

However, not all the components of the training are equally emphasized by all schools of TKD in the world and Ethiopia. In this regard, according to Tausk (2001) and Trulson (1986), there are two types of TKD, i.e., modern/sport TKD and traditional TKD. The sport TKD is characterized by its emphasis on competition and winning, mainly by scoring more points using chiefly kicking techniques. On the contrary, in traditional TKD, the focus is on self-defense and manipulation of vital points of the body; pattern/*Kata* training; meditation, teaching the philosophy of the art, and both hand and foot techniques.

From the results of this study, I have come to conclude that overall, the TKD training provided for adolescents by the four participant clubs was more of a modern/sport TKD than traditional TKD. This is because, most of the training in the four clubs is concentrated on sparring/fight and little attention was given to other aspects such as pattern practices, self-defense, meditation, philosophies and ethics of TKD, and hand techniques. Here it is important to note that I am not saying that the trainings in the four clubs were identical and purely sport/modern TKD. I believe that instead of dichotomizing the training of TKD as modern or traditional, we should understand it as a modern/traditional continuum. In this case, I assert that, though somewhat different, all the four clubs are found toward the modern end of the continuum.

Now we know that the TKD training provided for adolescents in Addis Ababa, Ethiopia was more of a modern one. The literature on martial arts and well-being (see Binder, 2007; Nosanchuk & MacNeil, 1989; Trulson, 1986) shows the advantage of traditional martial arts, compared to the modern ones, for well-being. This may tempt us into predicting that the training of TKD in Addis Ababa does not positively contribute to the well-being of its adolescent participants. However, the result of this study tells us the opposite. Over all, as discussed in the following sections, the training of TKD provided in Addis Ababa has multi-faceted benefits for the well-being of its adolescent participants, though it poses some actual and potential threats on the well-being of adolescents.

4.2.2. The Benefit of TKD Training for the Well-being of Adolescent

This study attempted to investigate the benefits of TKD training for adolescents' well-being, in different ways. Accordingly, two major quantitative analyses regarding the SWB of adolescents were done using PWI-SC. In the first analysis, the mean PWI-SC point of TKD adolescents was determined. In the second analysis, comparison was made between TKD

adolescents with different belt rankings, based on their mean points of PWI-SC. In addition, TKD adolescents were asked both in the interviews and questionnaires to tell the benefits they had got as a result of practicing TKD. Finally, coaches of these adolescents were also asked to tell their perception of the benefits of TKD for the adolescents.

The results of the study that are concerned with measuring SWB of adolescents using the PWI-SC came up with two findings. The first finding showed the TKD adolescents' level of SWB, as measured by the PWI-SC. From this finding, it is evident that TKD adolescents' PWI-SC mean point was 81.95 (95%CI: 79.70 to 84.20). A group's mean score of the PWI-SC can be interpreted and referenced by comparing the score of a group with the normal distribution of group means. In this case, the normative range of Western means is between 70-80 points and Australian mean is between 73.4 and 76.4 points (IWbG, 2013). It is also found that the normal distribution of group means of non-Western countries, specifically, Asians (China and East Asia) is some 10% lower than that of the Western and Australian, i.e., it has a range of 60-70 points and a mean of 65 (Lau, 2013). Based on such comparison, it can be claimed that TKD adolescents level of SWB or mean point of PWI-SC is very high, since it surpasses all the three normative ranges of the means of PWI-SC. Here it is important to note that this result of the study does not show cause and effect relation between the training of TKD and TKD adolescents' level of SWB.

Knowing TKD adolescents had a very high level of SWB, one may wonder whether there is a difference in the mean points of PWI-SC of TKD adolescents with different belt levels. The ANOVA finding, contrary to the research hypothesis, showed that there was no significant difference in SWB scores between TKD adolescents with different belt rankings, $F(2, 81) = 1.58$, $p > .05$. Lower level belts ($M = 83.88$, $SD = 10.20$), middle level belt ($M = 80.37$, $SD = 11.24$),

and higher level belt ($M = 79.54$, $SD = 9.53$) did not differ on their mean points of PWI-SC. This finding indicates that an adolescent who is at the lower level ranking of TKD has the same level of SWB as those TKD adolescents who have higher ranks.

In the case of adolescents' and coaches' perception of the benefits of TKD, results of the study showed that both TKD adolescents and coaches perceived that practicing TKD has multifaceted benefits for the well-being of adolescents. These benefits were classified into six themes: social benefits, physical benefits, mental benefits, self-defense, addiction avoidance, and other benefits. Within each theme, various specific benefits of TKD were identified. Social benefits include: good social relations, more friends, sociability, and prosocial behaviors like respecting others, good attitude to others, discipline, obedience, patience, and etc. Physical benefits include: disease prevention, vitality, speed, strength, muscle, physical appearance, endurance, and etc. Mental benefits involve: self-confidence, mental satisfaction, improved thinking and reasoning, concentration, wisdom, courage, happiness, sense of freedom, self-awareness, and etc. Addiction avoidance includes: distancing oneself from abusing substances and unnecessary places that lead to substance abuse. Other benefits involve: improvement in education, chance to compete in fight, new skills, opportunity to teach, and etc.

This result of the current study is consistent with what most of the literature say about the effects/impacts of the martial arts/ TKD. There have been a large number of studies that investigated the effect/impact of martial arts/TKD training on practitioners. According to Binder (2007) and Vertonghen and Theeboom (2010), most of these studies have found positive effect/impact of the martial arts. We could broadly divide the positive outcomes of the martial arts/TKD as physical and psychosocial. In the case of physical benefits, it was found that martial arts/TKD improves: flexibility, explosive power, and strength of boys (Khan and Joshi, 2011);

sensory organization and balance of children with developmental coordination disorder (Fong et al., 2011a); adolescents' development of postural control and vestibular function (Fong, 2011b); and health-related quality of life (Draxler et al., 2010).

In the case of psychosocial benefits, Binder (2007), in a review of studies regarding the effect of martial arts, concluded that participation in the martial arts is negatively associated with anxiety, aggression, hostility, neuroticism, and feeling vulnerable to attack; while it is positively related with self-confidence, independence, self-reliance, self-control, self-esteem, and easy-going and warm-hearted personality. Many studies I reviewed also support the positive outcomes of martial arts/TKD: lower verbal aggression and hostility and higher personal growth and self-acceptance (Steyn & Roux, 2009); greater improvements in cognitive self-regulation, affective self-regulation, prosocial behavior, classroom conduct, and performance on a mental math test. (Lakes & Hoyt, 2004); self-reliance and enthusiastic optimism (Kurian et al., (1994); less participation in risk behavior (Goldsmith, 2013); improvement in social dysfunction of children with autism spectrum disorder (Movahedi et al., 2013); improvement of juvenile delinquents on resistance to rules, impulsiveness, and inappropriate social behavior (Zivin et al., 2001); and etc.

The positive contribution of TKD for adolescents' well-being could be explained using the conceptual framework I developed. In the conceptual framework, it was shown that the training of TKD has its different components and these components could help adolescents meet their different fundamental needs in the different domains of their lives. And, this contributes for the betterment of the well-being of TKD adolescents and TKD adolescents could have better level of SWB compared to other non-TKD groups (see pages 63-67, for detail explanation).

Here, one question remained unexplained. In this study, it was hypothesized that there would be a statistically significant difference, in terms of SWB, between TKD adolescents of

different belt rankings. However, no statistically significant difference was found. How could we explain this situation? One possible explanation for this could be adolescents' constant/regular exposure to the different aspects of the training of TKD. As long as there is constant exposure of adolescents (irrespective of their belt ranking) to the different aspects of the training of TKD, there is a possibility of constantly meeting of their various needs in the various domains of their lives, thereby increasing and maintaining their SWB.

Finally, it is important to remember that from the result of this study about the nature of TKD training, it was shown that though almost all the components of TKD training are present in the studied clubs, they were emphasized to varying degrees, making the training more of a modern TKD. In relation to this, it has been learned that findings of studies of martial arts usually attribute the positive effects they found to a large presence of traditional elements and vice versa (see Binder, 2007; Nosanchuk & MacNeil, 1989; Trulson, 1986). Contrary to this, the findings of this study showed that the TKD training provided for adolescents in Addis Ababa, in spite of being a modern TKD, has positively contributed for the well-being of its practitioners.

4.2.3. Adolescents' Problems Associated with Practicing TKD

The TKD training provided for adolescents is not without actual and potential problems. In attempting to investigate the role of TKD training for adolescents' well-being, this study also examined adolescents' problems that are associated with practicing TKD. In so doing, TKD adolescents were asked, both in the questionnaire and in the interview, to identify problems they have encountered. Their coaches were also interviewed to comment on the issue. In addition to seeking the perception of the adolescents and their coach, efforts were made to specifically investigate TKD fight competition related problems.

Findings of this study showed that majority of the TKD adolescents and their coaches believed that practicing TKD by itself does not have any problem on the well-being of adolescents. For example, majority, 63.6% of the respondents in the questionnaire said they did not face any problem in TKD itself. However, the rest of the respondents and the interviewed TKD adolescents and coaches identified problems that are either directly or indirectly related to TKD. Based on this, four themes were identified. These themes are: family-related problems, community-related problems, injury, and miscellaneous problems. Specific problems in each theme were mentioned by participants. Family-related problems include: lack of awareness, lack of money to cover expenses, and disagreements with parents who tell their adolescents to quit training for various reasons, especially to emphasize education. Community-related problems include: incorrect or negative attitude toward martial arts, provocation by peers (mocking, challenging to fight, insulting), fearing practitioners, and etc. Injuries that are mentioned by respondent are mostly simple and include: leg injuries, bumps, bruises, muscle strain, and etc. Miscellaneous problems involve: busy schedule of adolescents, lack of TKD materials, far distance from home to clubs, and etc.

The two major themes identified from adolescents' and coaches' perceptions of the problem are: community related and family related problems. I think these findings are unique to this study, as most of the findings of other studies emphasized or found problems within TKD itself or practitioners themselves. For example, different researches found the following negative effects: increased youth anti-social behavior (Endresen & Olweus, 2005, cited in Vertonghen and Theeboom, 2010); more health concerns among black belts (Wargo et al., 2007); higher anger rate in adolescents (Lotfian et al., 2011); large increase in aggressiveness and greater tendency to delinquency of adolescents in modern TKD, but in the traditional TKD (Trulson, 1986); and

association between aggressiveness and belt level in modern martial arts, but in the traditional martial arts (Nosanchuk & MacNeil, 1989).

Nevertheless, the specific questions regarding TKD competition and its problems ended up showing other problems that were not perceived by adolescents and coaches. From the quantitative results, it is learned that minority of the respondents (25.5%) participated in fight competition. It seems that there are various ways by which TKD competition in Ethiopia could negatively influence the well-being of adolescent competitors. These ways could be summarized as: adolescents competing in adult competitions, poor infrastructure in TKD competitions, injuries, and unhealthy weight management (rapid losing or gaining of weight).

All coaches admitted that they entered adolescents below the age of 18 into adult category of fight competition. They claimed that they did so because they knew their students capacity. However, this action, I think, is problematic and poses a threat to the well-being of the adolescents. Here the adolescents are being made fight with opponents with, generally equivalent skill, but age. I believe that adults are physically stronger, wiser and more experienced than adolescents, and in this case, adolescents can be hurt. In relation to this, Buckle (n.d.) asserts that mismatching students or competitors in fight could be considered as a physical abuse.

Poor infrastructure in TKD competitions was reported to be present in all competitions except the highest level national competitions. This situation can be understood in terms of poor quality of protection equipments, absence of trained physicians/doctors, and absence of ambulance during competitions. Protection equipments, physicians, and ambulance services are essential to prevent and reduce injuries that could occur to competitors. However, they are not fully available, posing a huge threat on the well-being of the competitors. One reason for this could be the economic condition of our country which may not be able to afford such things.

Another reason for this could be the negligence or inactivity of those people who organize the TKD competitions.

In the case of injury, of the adolescents who participated in fight competitions, 38.5 % experienced injuries. This means the number of competitors who did not encounter injuries is larger than those who did. This finding could be surprising because of two reasons. First, in fight competition it seems that injuries are inevitable since the aim of the competition is to execute powerful kicks and punches to the opponent. Second, low level of injury occurred in a context where there are undesirable situations surrounding fight competitions (mismatching, poor infrastructure, and unhealthy weight management). In relation to this one longitudinal study Birrer (1996), cited in, Landa (2004) found that injury rates in the martial arts were low in general, but sparring was the main reason of injuries in TKD and karate. Another study by Gertland et al. (2001) cited in Landa (2004), reported that in a martial art called Muay Thai, the yearly rate of injury was 2-14/1000 practitioners.

Nevertheless, injuries are still there. All the coaches/clubs reported that there has never been any serious injury on their athletes, but minor injuries like bruises and bumps. Two coaches also remembered competitions in which their athletes caused serious injuries on others. All coaches did not witness or heard of any death in TKD fight competitions.

The literature shows us instances of death and serious injuries. Landa (2004), states that though very rare, death occurred in some martial arts competitions, i.e., in boxing and Muay Thai. But, injuries are more common and could include: brain injuries, broken bones, tears of the knees, sprains of the shoulders and ankles, cuts and bruises, bloody noses, and assorted infections. Pieter (2005) studied the literature regarding injuries of children in the martial arts (TKD, Judo, and Karate). It is found that in TKD more injured part of the body is the lower

extremities and sprains (joint injuries) are common. Kazemi et al. (2009) conducted a retrospective longitudinal study of injuries in TKD competitions. Results showed that the three most frequently injured body parts are: the head, foot, and thigh. Most common injuries are contusions/ bruise or discoloration of skin, sprains/ joint injury, and strains/ injury because of overuse of the muscle. Finally, the researchers concluded that TKD competitors below the age of 18 are more likely to be injured in competitions.

Unhealthy weight management or rapid weight loss or gain for the sake of competition is another problem evident in TKD. An athlete may engage in such activity for the sake of being fit into a particular weight category which is either his/her true weight category or which is supposed to be advantageous to win. Of the adolescents who participated in fight competitions, 75% experienced unhealthy weight management, especially weight reduction. This practice has been performed by all of the four clubs. These figure shows that this problem is prevalent in TKD, in Addis Ababa. In line with this, Kazemi et al. (2011), asserts that a rapid weight reduction activity is a common practice among TKD fight players usually to be fit for a lower weight category (than one's natural weight).

However, it seems that most of the coaches and the students in the current study did not consider it as a problem. Two of the coaches reasoned that the main reason for this to happen is that students did not listen to their coaches to get always ready or maintain their weight. Nevertheless, the coaches failed to stop this activity. Different authors in the literature consider this action as a serious problem. For example, Buckle (n.d.) claims that pushing students to cut weight can be considered as a form of physical abuse. Based on this, we can argue that failing to prevent adolescents from rapidly losing or gaining weight could be considered the same. Kazemi et al. (2011) also stated that rapid weight loss can result in negative biological effects such as

tension, dizziness, headaches, and confusion. Even worse, the study by Kazemi et al. (2011) showed that though athletes engage in such activities to get better advantages and to win, this practice was not found to indicate who would win in junior (14–17 years old) TKD athletes competition.

Finally, in conclusion, I would like to discuss the dilemma I encountered regarding the issue of TKD fight competition by adolescents or children. This dilemma is resulted because I have backgrounds in both social work and the martial arts. As a social work student, I feel that the whole idea of making children (as young as 6 or 13 years old) fight in competitions is difficult to accept in spite of the presence of many protective equipments and procedures. I said so because the goal in TKD fight competitions is to beat the opponent using mainly kicks that are powerful. Besides, higher points are awarded for kicks to the head. In this case we could see the possibility of frequent and serious brain injuries. This concern of mine is best illustrated by the following somewhat exaggerated idea from the literature. Pearn (1998, quoted in Vertonghen & Theeboom (2010, p. 528) asserted, in relation to Boxing, that, "...there is no place in contemporary society for a youth sport which has, as its primary goal, the infliction of acute brain damage on an opponent". Though, it is clear that the primary aim of TKD or its fight competition is not 'infliction of acute brain damage' (but developing and testing the athletes' skill), the above quote shows the possibility of danger in such competitions. Therefore, as a social worker, I incline to recommend that TKD fight competition for children and adolescents (below the age of 18 years) should be banned. In relation to this Pieter (2005) also recommended the disallowing of early participation of children in competitions.

As a social work student, I do not have any problem with TKD training in general because I did not find, in this study, that the training causes serious injuries or any major threat

on the well-being of the students. In line with this, with regard to injuries in training of TKD and other martial arts, Zetaruk et al. (2004), in their study, concluded that “martial arts appear to be safe for young athletes, particularly those at beginner or intermediate levels” (p.29).

As a martial arts student, I incline to support the continuation of TKD fight competitions, of course, with appropriate protection equipments and procedures. My reason for arguing so is that an adolescent who wants to be expert in TKD, must develop his/her skills and instinct by training for fight and participating in fight competitions. In relation to this, Landa (2004) asserts that sparring/ fight training and competitions are indispensable ways of simulating a real life confrontation and enabling a student become good at learning. To support this argument, Landa (2004) cited a study by Perrot, et al. (2000) who found that previously injured judo students came to have better sensory and cognitive adaption abilities; moreover, those practitioners with the worst injuries exhibited greater improvement in balance.

Here, I am not saying that adolescents should be injured to be good at TKD, but should face real life-like confrontation, as much as possible, to be good at TKD.

My dilemma regarding fight competition remains unresolved for the time being. But, I would like to conclude this discussion by pointing a possible alternative and by sharing one author's recommendation to reduce injuries in fight competitions, for adolescents/children. In the ‘literature review’ section, it was discussed that there are three approaches to sparring trainings/competitions, i.e., unrestricted sparring (no protectors), focus/non-contact sparring, and sparring with protectors, while strikes are restricted (see Park, et al., 2009). In this case, coaches may consider changing the approach of competition for adolescents to focus/non-contact sparring (in which fight trainings and scoring in fight competitions are done without actually hitting the partner/opponent, but by pointing the strike one inch away from the target). Coaches

may also consider the recommendations of Pieter (2005) who suggested the following: disallowing early participation of children in competitions; disallowing strikes to the head and face; using closed fists instead of open hands, using foot protection; making the use of mouth guards mandatory; and using well-experienced referees.

Chapter Five: Implication, Conclusion, and Limitation of the Study

5.1. Implication of the Study

I believe that the findings of this study have a number of implications for the different aspects of social work, i.e., research, practice, education, and policy. This study is the first of its kind (that studies about the role of martial arts on well-being) in Ethiopia, or more specifically, in our country's social work. This by itself can be considered as a contribution as it paves the way for future researchers to do further studies. The findings of this study could serve as a starting point for researchers who are interested in measuring and promoting well-being, in addition to studying the role of the martial arts. In this regard, I suggest that interested researchers study different types of martial arts and even other sports in relation to well-being.

The findings of this study also have implication for social work practitioners. It is well-understood by social workers that adolescence is a developmental stage characterized by multidimensional changes and challenges of adaption. The results of this study and most of the literature showed that TKD contributes for the well-being of adolescents. In order to help adolescents successfully adapt the developmental changes they encounter, prevent problems associated with the changes, and promote their well-being, practitioners might consider using TKD as an intervention strategy. In addition, practitioners could use TKD while working with adolescents with different kinds of psychological, physical, and social problems and adolescents who have low satisfaction in life. When using TKD as an intervention strategy, I suggest that practitioner emphasize the traditional TKD for better results. Practitioners could also mix other therapeutic strategies with TKD interventions.

From this study, some inputs for social work education could also be gained. These inputs could be in terms of well-being, sport/physical exercise, and the martial arts/TKD. It is

crystal-clear that social work is ultimately all about securing the well-being of human being. However, I have never seen any course that is specifically concerned with specifically the concept of well-being. Therefore, I suggest that social work education include a course in well-being. In addition, anything that contributes for or influence well-being should be taught or learned in social work education. In this case, physical exercise/sport and the martial arts/TKD could be emphasized.

The importance of physical exercise and sports (including TKD) for health, youth development, nation building, and etc is well-underlined and given emphasis in different policies of our country. These policies include: the National Youth Policy (MYSC, 2004), Urban Youth Packages (n.d.), Rural Youth Packages (n.d.), National Sport Policy (MYSC, n.d), GTP (MoFED, 2010), and the health policy of Ethiopia (MoH, n.d.). However, there are, I think, two areas where social workers could work in terms of advocacy. The results of this study showed that in Ethiopia's TKD, adolescents as young as 13 years old participate in fight competitions in a context where poor competition infrastructures are exhibited. And, this could pose a threat to the well-being of these adolescents. Therefore, social workers might want to advocate for the banning of TKD and other martial arts fight competitions by children and adolescents. Another area of advocacy for social workers could be related with the current government's undesirable intervention in TKD and other martial arts. From the interviews with TKD coaches, I have come to learn that the government of the country had been supportive of the martial arts, but it is currently trying to impose high taxes (e.g., requiring them to install cash-register machines) and get coaches and other people (who run recreational programs in youth centers) organized in what it calls 'one to five' model or grouping schemes. This intervention of the government, according to the coaches, is threatening the future of TKD/martial arts in Ethiopia. Therefore, since TKD is

found to be contributing for the well-being of adolescents, social workers could advocate (after investigating the issue further) that the government should stop unnecessarily intervening and should continue supporting TKD clubs and their students.

5.2. Conclusion

Adolescence is a time of multifaceted changes and associated problems resulting from maladjustment. Successful adaption during this stage helps adolescents to have well-being and lead a better life as adults. And, this positive development of adolescents is of paramount importance not only for adolescents but also for their families, communities, societies, and even for the world.

The training of TKD/Martial arts could be one way to bring about desirable adolescent development. The literature in the area of exercise/sport and the martial arts mostly reported positive outcomes of such activities for the lives of adolescents. This study examined the role of TKD training on the well-being of adolescent practitioners. In so doing, it addressed different aspects of the situation - the nature of the training, the benefits of TKD, TKD adolescents' level of SWB, comparison of adolescents based on their level of SWB, and problems associated with practicing TKD. Overall, the results of this study showed that the training of TKD contributes positively to the well-being of adolescents, in spite of some problems related with it.

Therefore, I advise different concerned parties about the well-being of adolescents to consider using TKD (preferably the traditional one) to enable adolescents develop positively in physical, psychological, social, and spiritual dimensions. I encourage parents to send their children for such training, after carefully studying the nature of the coach and the club. I advise social workers and other professionals working with adolescents to use such training as intervention strategy. Coaches of TKD should give more emphasis to the traditional elements of

the training; improve gym facilities, and reconsider adolescents' participation in competitions. Finally, the government of the country also should support TKD in every way possible.

5.3. Limitation of the Study

This study examined the role of TKD training on the well-being of adolescents in Addis Ababa and it is not without limitations. Therefore, one needs to be cautious when making generalizations based on this study.

In this study, only one of the many martial arts, i.e., World TKD is studied. The study was delimited to studying World TKD clubs in Addis Ababab, not in other parts of the country. It is also important to note that two of the World TKD clubs asked to participate in this study (after random sampling), failed to do so after agreeing to participate. Nevertheless, they were replaced by other two randomly selected clubs. The question why these clubs failed to participate may raise a suspicion. However, I believe that they failed to participate in this study not because they were trying to hide something, but because of their busy schedules (for example, one of them worked in his part time at different gyms and the other had positions in the world TKD federation).

In this study it was found that TKD adolescents had a very high level SWB (mean points of PWI-SC), when referenced to the normal distribution of group means (Asian, Australian, and European means). Nevertheless, this does not imply any cause and effect relation between the training of TKD and adolescents' SWB; other factors than the training of TKD might have played a role in this case.

Here, it is important to note that, in this study, I made an effort to make use of two other more advanced statistical tests to further investigate the role of TKD training on SWB of adolescents. The first statistical test tried was multiple regressions, to see and predict the

association between participation in TKD training (time/years spent in TKD training) and adolescents SWB (PWI-SC), while controlling for other variables (age, sex, level of education). However, two fundamental assumptions for the test, i.e., homoscedasticity and linearity, were violated. Therefore, I was unable to use multiple regressions.

The second statistical test tried was one way ANOVA, by including non-TKD adolescents ($n = 50$, from grade nine students of Entoto Amba Secondary school in Addis Ababa) as a comparison group. In this case, the independent variable was belt level in TKD (which has four categories, i.e., non-TKD adolescents, lower level belts, middle level belts, and higher level belts) and the dependent variable was adolescents' SWB. Nevertheless, it was found that the variation within the non-TKD group was large enough to result in the violation of one of the fundamental assumptions for this test, i.e., homogeneity of variance ($F(3,130), 8.23, p < 0.001$). The means and standard deviations of the four groups in the ANOVA were: non-TKD adolescents ($M = 71.64, SD = 14.80$), lower level belts ($M = 83.89, SD = 10.20$), middle level belts ($M = 80.38, SD = 11.25$), and higher level belts ($M = 79.55, SD = 9.53$). From the above results it can be learned that non-TKD adolescents had lower mean points of PWI-SC than the rest of the groups. There is at least a mean difference of -7.89 points (between non-TKD adolescents and higher level belts). Nonetheless, it cannot be concluded that the training of TKD caused this difference; other sources of variation might exist. To compare TKD adolescents with non-TKD adolescents based on their SWB, matching of participants on different variables (socioeconomic status, age, gender, and etc) would have been better. However, in this study matching of participants was not done because of a number of constraints including financial difficulty and lack of time. Therefore, further investigations in this direction, more preferably experimental studies, are needed.

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Appendices

Appendix A: Consent Form for Taekwondo Clubs and their Head Instructors

Addis Ababa University

School of Social Work

Martial Arts and Adolescents: The Role of Taekwondo Training on the well-being of Adolescents Practitioners, in Addis Ababa

Why are we asking you?

Michael Emru, a master's student at Addis Ababa University's School of Social Work, is conducting a study about the role of taekwondo training on adolescents' well-being. To get relevant data for this study, it is necessary to collect data/information from adolescent (aged 12-18) practitioners of taekwondo and their taekwondo instructors. Therefore, we are asking you to give your consent so that your club's head taekwondo instructor and adolescent students of taekwondo will participate in this study by answering questions in a questionnaire or in an interview. Please read this form and ask if you have any questions, before you give your consent.

Please note that participation in this study is voluntary and your students themselves should give us their own assent/consent to participate in this study, in addition to your permission. Besides, your students can withdraw from participation even after agreeing to participate in the study. We assure you that participation in this study will never cause any harm for both your club and your students.

Why is this research being done?

This research is being done to investigate the role of taekwondo training on the well-being of adolescent practitioners like your students. The researcher believes that training in taekwondo is beneficial for different aspects of adolescent's well-being, including physical, social, and psychological well-being. However, this situation has never been scientifically studied in Ethiopia, to the researcher's knowledge. Therefore, this current study is attempting to scientifically study this issue. In an effort to do so, the researcher plans to ask both taekwondo instructors and students taekwondo some questions about the benefits and challenges of participating in taekwondo training for their well-being. Both instructors and students will either be given a questionnaire to fill in or be interviewed by the researcher.

What is the purpose of this research?

The purpose of this research is to assess the role of taekwondo training on the well-being of adolescents, in Addis Ababa city.

What procedures are involved?

In this study some 108 adolescents are expected to participate by filling a questionnaire. In addition, some eight adolescents will be participating in the study by answering questions in an in-depth interview format. Four head instructors of taekwondo will also be involved in the study by answering questions on a questionnaire and in an interview. Filling in the questionnaire for both the instructors and adolescent students will not take more than 30 minutes of their time. The interviews may take 1 – 1^{1/2} hours.

What are the potential risks and discomforts?

The researcher believes that there is no any risk associated with participation in this study, for your club/instructors and students. The only possible thing that might happen may be that some of your students may feel some discomfort when they are asked how happy they are with the different dimensions of their well-being (e.g., with the things he/she wants to be good at).

Are there benefits to taking part in the study?

Participation in this study will not have any direct material and financial benefits to your club and students. However, there can be a number of indirect benefits. First, you and your students may get some mental satisfaction and experiences from participating in this study. Second, the findings of this study will inform different stakeholders (like adolescents, parents, taekwondo instructors, social workers and policy makers etc) about the benefits and challenges of taekwondo training on adolescents' well-being so that they can alter/improve their actions accordingly. In addition, it is important to remember that this study is probably the first one that study taekwondo and its role for adolescents, in Ethiopia.

What about privacy and confidentiality?

Besides you and your adolescent students, only the researcher and the parents of the adolescents will know that your club and students are participating in this study. The data collected from your club/instructors and students and other clubs will be used only for academic purpose. No identifying information about your club/instructors and students will be disclosed at all. To ensure this, the name of your club, instructor, and students will not be required to be written or told in the questionnaire or during the interview. Instead of names the researcher will use numbers/codes to distinguish the information provided by different clubs/instructors and students. In addition, any other identifiable information will not be asked about the club/instructors and students. So, except the researcher, no one will be able to identify which questionnaire or interview is of your club and your students. Furthermore, once data is collected, it will be stored in a password-protected computer.

What are costs for participating in this study?

Participation in this study has no material or financial cost for both your club/instructor and students. The only thing your club/instructor and students may sacrifice is some of their time.

Who should I contact if I have question?

The researcher in this study is Michael Emru Tadesse. If you have any question at any time, you can contact the researcher using the following addresses: mobile phone 0912285077 and e-mail: michael.emru7@gmail.com

What are your rights as research participant?

Participation in this research is completely voluntary. The decision whether or not to participate in this study will not affect your club and students in any way. Even after giving consent to participate in this study, you and your students can withdraw from the study at any time you wish.

You will be given a copy of this form for your information and to keep it for your personal record. If you or your students feel that you/they have not been treated according to the description in this form, or you/they have any question about your/their rights as a research

participant, you or your students may call Addis Ababa University, School of Social Work at +251-116-186-441.

Signature of subject or legally authorized Representative

I have read (someone has read to me) the above information. I have been given an opportunity to ask questions and my questions have been answered to my satisfaction. I agree to participate in this research. I have been given a copy of this form.

Name of the Taekwondo Club

Signature of head taekwondo instructor

Date

Printed name of head taekwondo instructor

Signature of Researcher

Date (must be same as the above dates)

Appendix B: Assent Form for TKD Adolescents Participants in the Interview

Addis Ababa University

School of Social Work

Martial Arts and Adolescents: The Role of Taekwondo Training on the well-being of Adolescents Practitioners, in Addis Ababa

Dear participant, my name is Michael Emru and I am a master's of social work student at Addis Ababa University. Currently, I am doing a research to know the role of taekwondo training for adolescent practitioners of taekwondo like you. Therefore, I am kindly asking you to voluntarily participate in this study by answering question in an in-depth interview. The interview may take some 30 – 90 minutes.

Here are some important points you should be aware of before agreeing to participate in the study. First, participation in this study is completely voluntary. You can refuse to participate in this study any time you want to. You can also skip answering to any question in the interview, if you want to. Second, I do not attach your name in the interview; rather I will use a pseudonym or a code number so that your anonymity will be secured. Since you are not going to be asked any identifiable information, no one will be able to know that this interview is done with you. In addition, the information you give in this questionnaire will never be used for any other purposes than academic and professional use.

Third, participation in the study will not gain you financial or material rewards. But you may get mental satisfaction and some experience since you are contributing to this study which

is probably the first research in Ethiopia that studies the role of taekwondo for the well-being of adolescents like you.

If you have any question regarding this study, you can contact me by the following addresses: Mobile phone number: 0912285077 or E-mail: michael.emru7@gmail.com

By putting your name and signature below, you inform me that you are volunteered to participate in this study. You will be given a copy of this form after you have signed it.

Name of the research participant

Date

Signature of the research participant

Name of the researcher

Date same as the participant

Signature of the researcher

Appendix C: Questionnaire for TKD Adolescents

Addis Ababa University School of Social Work

Martial Arts and Adolescents: The Role of Taekwondo Training on the well-being of Adolescents Practitioners, in Addis Ababa

Dear respondent, my name is Michael Emru and I am a master's of social work student at Addis Ababa University. Currently, I am doing a research to know the role of taekwondo training for adolescent practitioners of taekwondo like you. Therefore, I am kindly asking you to voluntarily participate in this study by responding to the questions found in this questionnaire. Please note that your participation in this study is so valuable for this study which is probably the first of its kind in Ethiopia.

Here are some important points you should be aware of before agreeing to participate in the study. First, participation in this study is completely voluntary. You can refuse to participate in this study any time you want to. You can also skip answering to any question in the questionnaire, if you want to. Second, you must not write your name in the questionnaire so that your anonymity will be secured. Since you are not going to be asked any identifiable information, no one will be able to know that this questionnaire is filled by you. In addition, the information you give in this questionnaire will never be used for any other purposes than academic and professional use.

Third, participation in the study will not gain you financial or material rewards. But you may get mental satisfaction and some experience since you are contributing to this study which is probably the first research in Ethiopia that studies the role of taekwondo for the well-being of adolescents like you. Finally, by filling in this questionnaire and returning it to the researcher, you give your consent/assent (you inform the researcher that you voluntarily agreed) to participate in this study.

Thank you so much, in advance, for your voluntary participation!

- Please do not write your name.
- Please read the questions carefully.
- Please indicate your answer for questions with boxes by ticking in the boxes or by putting ✓ in the boxes.
- Please answer questions with blank space by writing on the provided blank spaces.
- There is no time limit in filling this questionnaire.

1. How old are you? _____
2. What is your sex? _____
3. What is your religion? _____
4. What grade student are you in your school? _____
5. What is your belt level in Taekwondo? _____
6. For how many years have you practiced taekwondo? _____
7. On average, how many days per week do you practice taekwondo in your club?

8. On average, how long does one session of your taekwondo training take (in hours)?

9. How do you describe the financial or the wealth status of your family?
Very wealthy ☐ Neither wealthy nor poor ☐
Wealthy ☐ Poor ☐ Very poor ☐
10. Did you have training in other martial arts, before you began taekwondo training?
Yes ☐ No ☐

-How long (for how many years/months) have you practiced it/them?

1. How happy are you with your life as a whole?

Very Sad Not happy or sad Very Happy

0 1 2 3 4 5 6 7 8 9 10

Very Sad 0 1 2 3 4 5 6 7 8 9 10 Very Happy

Very Sad 0 1 2 3 4 5 6 7 8 9 10 Very Happy

Not happy or sad

Very Sad 0 1 2 3 4 5 Not happy or sad 6 7 8 9 10 Very Happy

Very Sad Not happy or sad Very Happy

0 1 2 3 4 5 6 7 8 9 10

[] [] [] [] [] [] [] [] [] [] []

Very Sad 0 1 2 3 4 5 6 7 8 9 10 Very Happy

Very Sad 0 1 2 3 4 5 6 7 8 9 10 Very Happy

Very Sad 1 2 3 4 Not happy or sad 5 6 7 8 9 Very Happy 10

Part Three: In this part, you will be asked different questions about taekwondo.

1. Could you tell me why you do participate in taekwondo training? What is your main reason? -----

2. Does practicing taekwondo have any benefit for you? How do you describe the benefits of practicing taekwondo for your well-being? -----

3. Have you ever experienced any problem in your life as a result of practicing taekwondo? How do you describe the problems in your well-being (life) as a result of practicing taekwondo? -----

4. If you have ever experienced any problems in your taekwondo training, what should be done to solve those problems? -----

5. Have you ever participated in taekwondo competitions? Yes ☐ No ☐
6. If you participated in taekwondo competitions, have you ever been physically injured in competitions?
Yes ☐ No ☐
7. If you participated in taekwondo competitions, have you ever attempted to lose or gain weight in a short time so that you could be fit for a particular weight category?
Yes ☐ No ☐
8. How do you want taekwondo training to be (What should be added and what should be removed from the training)?
9. Do you have any additional comment you would like to make in relation to taekwondo and your well-being? -----

Thank you very much for your participation!

Appendix D: Questionnaire for Non-TKD Adolescents

Addis Ababa University

School of Social Work

Martial Arts and Adolescents: The Role of Taekwondo Training on the well-being of Adolescents Practitioners, in Addis Ababa

Dear respondent, my name is Michael Emru and I am a master's of social work student at Addis Ababa University. Currently, I am doing a research to know about the well-being of adolescents. Therefore, I am kindly asking you to voluntarily participate in this study by responding to the questions found in this questionnaire. Please note that your participation in this study is so valuable for this study.

Here are some important points you should be aware of before agreeing to participate in the study. First, participation in this study is completely voluntary. You can refuse to participate

in this study any time you want to. You can also skip answering to any question in the questionnaire, if you want to. Second, you must not write your name in the questionnaire so that your anonymity will be secured. Since you are not going to be asked any identifiable information, no one will be able to know that this questionnaire is filled by you. In addition, the information you give in this questionnaire will never be used for any other purposes than academic and professional use.

Third, participation in the study will not gain you financial or material rewards. But you may get mental satisfaction and some experience since you are contributing to this. Finally, by filling in this questionnaire and returning it to the researcher, you give your consent/assent (you inform the researcher that you voluntarily agreed) to participate in this study.

If you have any question regarding this study, you can contact me by the following addresses: Mobile phone number: 0912285077 or E-mail: michael.emru7@gmail.com.

Thank you so much, in advance, for your voluntary participation!

Directions on how to fill in the Questionnaire:

- Please do not write your name.
- Please read the questions carefully.
- Please indicate your answer for questions with boxes by ticking in the boxes or by putting ✓ in the boxes.
- Please answer questions with blank space by writing on the provided blank spaces.
- There is no time limit in filling this questionnaire.

Part One: Please tell us something about you.

1. How old are you? _____
2. What is your sex? _____
3. What is your religion? _____
4. What grade student are you in your school? _____
5. How do you describe the financial or the wealth status of your family?
 Very wealthy ☐ Neither wealthy nor poor ☐
 Wealthy ☐ Poor ☐ Very poor ☐
6. Do you participate in any physical exercise/sport activities?
 Yes ☐ No ☐
- 6.1. If your answer for question number 6 is "yes", what is the name of the exercise/sport? -----
 -How long have you done it? -----
 -Where do you do it -----

Part Two: Now, you will be asked a few questions about how happy you feel, using a scale from zero to 10. On this scale, zero means you feel VERY SAD, 10 means you feel VERY HAPPY. And the middle of the scale is 5, which means you feel neither HAPPY nor SAD. There are no right or wrong answers. It's what you think that matters.

1. How happy are you with your life as a whole?

Very Sad 0	1	2	3	4	Not happy or sad 5	6	7	8	9	Very Happy 10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

2. How happy are you about the things that you have? Like the money you have and the things you own?

Very Sad 0	1	2	3	4	Not happy or sad 5	6	7	8	9	Very Happy 10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

3. How happy are you with your health?

Very Sad 0	1	2	3	4	Not happy or sad 5	6	7	8	9	Very Happy 10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

4. How happy are you with the things that you want to be good at?

Very Sad 0	1	2	3	4	Not happy or sad 5	6	7	8	9	Very Happy 10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

5. How happy are you about getting on with the people you know?

Very Sad 0	1	2	3	4	Not happy or sad 5	6	7	8	9	Very Happy 10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

6. How happy are you with how safe you feel?

Very Sad 0	1	2	3	4	Not happy or sad 5	6	7	8	9	Very Happy 10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

7. How happy are you about doing things away from your home?

Very Sad 0	1	2	3	4	Not happy or sad 5	6	7	8	9	Very Happy 10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

8. How happy are you about what may happen to you later on in your life?

Very Sad 0	1	2	3	4	Not happy or sad 5	6	7	8	9	Very Happy 10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Thank you very much for your participation!

Appendix E: Interview Guide for TKD Adolescents

Addis Ababa University

School of Social Work

**Martial Arts and Adolescents: The Role of Taekwondo Training on the well-being of
Adolescents Practitioners, in Addis Ababa**

Date:

Time:

Place:

Interviewee:

Role of the interviewer:

Consent:

Acknowledgment:

Questions

- Age?
- Sex?
- Level of education?
- Belt level in TKD?
- Why did you join the training of TKD?
- What benefits have you got as a result of participating in TKD training?
- What problems have you faced as a result of participating in TKD training?
 - What particular thing created or exacerbated the problem?
 - What should be done to solve the problem/s?
- Have you ever participated in TKD sparring competitions?
 - How old were you when you first participate?
 - Did you experience any injury?
 - Did you try to rapidly gain or lose weight? How?
- How do you want the training of TKD to be?
 - What should be added and removed?
- Is there any other comment you would like to make?

Appendix G: Interview Guide for TKD Instructors

Addis Ababa University

School of Social Work

**Martial Arts and Adolescents: The Role of Taekwondo Training on the well-being of
Adolescents Practitioners, in Addis Ababa**

Date:

Place:

Time:

Interviewee:

Role of the interviewer:

Consent:

Acknowledgment:

Questions:

- Age
- Sex
- Belt level in TKD
- How long have you trained in TKD?
- Do you have experience in other martial arts?
- What are the components of the training of TKD in your club?
 - How much emphasis is given for each component of the training? Why?
 - Could you put them in order of importance?
- What do you think are the benefits of TKD training for adolescents?
- What do you think are the problems adolescents could face as a result of practicing TKD?
- Do your students participate in TKD competitions?
 - Have your students ever attempted to rapidly reduce or gain weight?
 - Have your students ever been injured?
 - What are the minimum requirements for students to participate in competitions?
- What is the belt ranking order in your club?
 - How would you divide your students into three categories based on their belt level?
- Is there any other comment you would like to make?