



REVIEW ARTICLE

Positive Youth Development (PYD) in Martial Arts Activities: Literature Review

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Abstract

Several literatures provide indications on the results of their research that martial arts activities can have a positive effect on the development of adolescents. However, martial arts activities that have been running still do not reveal programs that lead to positive youth development. Apart from that, there is still uncertainty regarding the martial arts training program which is still focused solely on achieving achievements. This study reveals the contribution or role of martial arts activities by providing an overview and explaining the results of the latest research on martial arts activities for positive adolescent development. Literature data collection techniques were taken using systematic computer searches consisting of several journal articles and dissertations, as well as manual data search results. Data collection was carried out for two months in January and February 2024. Several articles were eliminated which were then focused on the 17 articles used in this study. The results show that martial arts activities have had a major impact on positive adolescent development in recent years. The main topics in several research results in general are about prosocial behavior, antisocial behavior, aggression and resilience. There is strong agreement among researchers about the potential of martial arts activities for positive adolescent development. In addition, the discussion in several studies shows clearly that the main influence in martial arts activities is closely related to how the trainers make a strong contribution in providing understanding and also the teaching style used in martial arts activities.

Keywords

Positive Youth Development, Martial Arts, Physical Activity

INTRODUCTION

Adolescence is a developmental stage during which young individuals go through a period of personal growth. Teenagers generally struggle with decision-making and accepting responsibility for their actions. This is because the brain is still developing (Crone, 2009). This element is significantly influenced by contextual and personality characteristics (Capuzzi & Gross, 2014). Due to continuous brain development, if a teen struggles or behaves in a way that is incompatible with the society in which they live, this will affect their aberrant behavior. Examples

are cases of dropping out of school and termination of employment (Capuzzi & Gross, 2014; DiClemente, 2013), and criminal behavior (Baron, 2003; Estévez & Emler, 2011).

According to Bailey et al. (2013), sports activities have a good effect on teenagers' psychosocial development and may encourage more desired conduct. There are numerous signs that self-defense activities (MA) can have a favorable impact on teenagers' development (Elling & Wisse, 2010). Furthermore, martial arts can serve as an alternative activity for teens, as evidenced by the fact that it is ranked 10th among sports that appeal to youths (Gubbels et al., 2016). The

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popularity of martial arts competitions encourages scholarly investigation into the effects of martial arts themselves. This problem is presented in sports scientific conferences, martial arts scientific meetings, and scientific publications on martial arts. It is also articulated in several scientific studies that have been published in national and international journals.

Due to the favorable effects of martial arts training, they have been widely incorporated into both the educational and professional fields in practice (Abrahams, 2004; Gail et al., 2001; Theeboom & Knop, 1999; Vertonghen & Theeboom, 2008). Public opinion on this beneficial effect is still divided, though. Numerous media sites have published stories concerning young people who had previously participated in martial arts but are now actively participating in terrorist operations (Gubbels et al., 2016). In contrast to other media, martial arts are thought to have a powerful influence and be able to lower juvenile crime (van der Kooi, 2020).

It has been unclear how martial arts training affects development based on a variety of empirical research findings and youth-related literature. Positive socio-psychological developmental consequences, on the other hand, have been observed (Kurian et al., 1994; Steyn & Roux, 2009; Trulson, 1986). On the other hand, certain findings Reynes & Lorant (2001) and Wargo et al. (2015) indicated that martial arts practice had little effect on adolescent development. According to several research findings, martial arts involvement was negatively impacted (Reynes & Lorant, 2002).

Few literature evaluations of various research findings have been done thus far (Vertonghen & Theeboom, 2010). Vertonghen & Theeboom (2010) performed and collated recent literature studies. The outcomes of this research looked at the sociopsychological effects of youth martial arts training. Their investigation was quantitatively restricted and concentrated on publications published in scholarly journals up until 2010. This prompts the query of whether involvement in martial arts is associated with behavior modification. But there are issues with the connection. There has never been any qualitative research done on this topic.

There are two components to the study done by Vertonghen & Theeboom (2010). The first talks about the potential effects of practicing martial arts. The study discovered that involvement in martial

arts activities had a positive effect on teenage development. like improved self-control and a decline in violent conduct. This is consistent with the degree of adolescent aggression linked to martial arts practice. However, given the paucity of convincing data, several of the study's findings seem dubious. According to certain research findings, engaging in martial arts exercises had no adverse effects on the participants' sociopsychological makeup. The second section addresses the drawbacks of reported research findings (Vertonghen & Theeboom, 2010). Cross-sectional or longitudinal designs are used in published studies. Some researchers who employ a cross-sectional methodology do not manage the sample background in terms of personality traits. Additionally, the majority of the research findings did not examine the function of the trainer or the various traits of the various martial arts.

In a review of two or more research findings, (Gubbels et al, 2016) was conducted. This study looks at the connection between adolescent martial arts participation and outward behavior. Only rage, aggression, violence, hostility, and antisocial behavior are shown by the research. The analysis is restricted to quantitative studies released through 2011. Clarification on the relationship is provided while still reiterating the original query, "Is there a relationship between martial arts participation and behavior change?" According to the findings of (Gubbels et al, 2016), there is no link between adolescent martial arts engagement and outward behavior in general. However, the findings of these articles find it ambiguous because it demonstrates that teenagers who engage in martial arts activities exhibit more external behavior than adolescents who do not. Compared to karate, the martial art of judo has a stronger association with outward behavior, according to the study's findings Gubbels et al. (2016). The findings of this study also suggest that team sports players, non-martial athletes, and practitioners of martial arts share a level of external conduct.

However, Vertonghen & Theeboom (2013) devised a model to show martial arts practice. The goal of this study, which is based on some literature, is to identify the variables that affect how pencak silat training affects behavior development in general and how it affects the behavior development of teens in particular. According to Vertonghen & Theeboom (2013), the structural quality of the martial arts, the training methods used to guide

participants, and the characteristics and social background of the martial arts participants are the most crucial factors in martial arts activities. The method by which these elements operate is not fully explained by the current research, which is still in its early stages. As a result, it is concluded that there is a good chance that the variables influencing the association between martial arts and behavioral development are not fully understood (Vertonghen & Theeboom, 2013).

The aforementioned study demonstrates that the impact of martial arts (MA) activities on adolescent development is still uncertain and not well understood, according to several research findings on MA (Vertonghen & Theeboom, 2013). This study tries to shed some light on the ambiguity around the benefits of martial arts training for young people.

MATERIALS AND METHODS

Research findings from September 2016 to April 2017 were used in this literature. EBSCO Host, PubMed, Web of Science, and Scopus were used in an online computer search to find the research data. Using three keywords in three categories, search data from diverse study findings are produced. The first is the martial arts category, which includes wrestling, aikido, karate, kickboxing, and taekwondo. The second search area focuses on behavioral development outcomes and covers aggressiveness, self-identity, interaction, motivation, and social networks. This category is consistent with research by Gubbels et al., (2016) and Vertonghen & Theeboom (2013). Young people, adolescents, and children make up the third category of the subject of research. 153 items were found after searching these three categories. To support this study, the articles used must meet six main criteria including the following:

1. Martial arts and psychosocial behavior must be related.
2. Youth and adolescents must be the target audience. Vertonghen & Theeboom (2010) used a broader scope in their research, but this study narrowed the focus to focus on adolescents between the ages of 15 and 21. Teenagers are going through a period of personality development, which is why.
3. Literature review is part of this study. Vertonghen & Theeboom (2010) used exclusively quantitative research in their study.

4. New research is not examined to serve as a reference source in evaluating the outcomes of martial arts activities, as is done when researchers explain the findings of a study conducted by Vertonghen & Theeboom (2010).
5. Peer review was used in this study since martial arts is such a distinctive subject that it calls for input from practitioners or subject matter experts. Sixth, this study only has studies and research outcomes in English and Dutch linked.

As was mentioned in the last debate, the goal of this topic is to help solve the riddle surrounding juvenile martial arts training by offering an overview and analysis of some of the most recent studies on the maturation of adolescent behavior. Given that this study was not undertaken to compare other studies or research methodologies, it included the findings of qualitative and qualitative research. This study was conducted on the basis of similarities and linkages between the differences in the results of previous studies. The results of the study were analyzed independently by researchers using qualitative data analysis software. Although this research was carried out independently, the researchers spoke with martial arts experts, teachers, and coaches about the findings to lessen the possibility of ambiguity during the research process.

RESULTS

In contrast to the research done by Vertonghen & Theeboom (2010). The types of martial arts that have been seen have changed. In the past, research has been done on traditional martial arts like taekwondo, gambling, and karate. Their investigation of adolescent behavior also made this clear. The study of martial arts like boxing, Thai, kickboxing, and mixed martial arts (MMA) has become more popular during the past ten years. This is due to an increase in studies on contemporary martial arts (boxing, Thai boxing, kickboxing, and MMA) that are connected to teenage behavior since 2010.

Although most studies on martial arts use quantitative methods (Baar & Wubbels, 2011; Bogdan Iulian & Sabina, 2015; Bayansalduz, 2014; Kuśnierz et al., 2014; Rutten et al., 2011; Vertonghen & Theeboom, 2012; Lotfian et al., 2011; Ziaee et al., 2012), this study uses qualitative methods. This suggests that certain martial arts

research goals exclusively concentrate on athletic results. The method and significance of the martial art itself are only briefly discussed in the research on martial arts. The findings of this study are presented in two parts since the majority of research

focuses on the outcomes of practicing martial arts (sport outcome) and some other research focuses on the significance of martial arts activities. Specifically, the process features, influencing factors, and social psychological components.

Table 1. Search results for articles included in the literature review

No	Writer and year	Country	Design and research methods	Martial arts type	Positive or negative results
1	Vertonghen & Theeboom (2008)	Belgium	Qualitative and quantitative; interviews with children (98) and teachers (15), questionnaires with parents (68)	Judo, aikido, Thai boxing kick	Positive
2	Elling & Wisse (2010)	Dutch	Quantitative and qualitative; observations, questionnaires and interviews with youth, parents, and staff	Martial arts in general	Positive
3	Vertonghen & Theeboom (2010)	Belgium	Quantitative and qualitative; observation, questionnaires and interviews with adolescents	Judo, Aikido, Thai boxing kick	Neutral
4	Rutten et al. (2011)	Dutch	Quantitative; questionnaire with young athletes	Taekwondo	Positive regulates anti-social behavior in the context of martial arts sports, Negative on moral grounds between martial arts
5	Lotfian et al. (2011)	Iran	Quantitative; questionnaire with teenage girl	Judo, Karate	Negative on judo, neutral on karate
6	Baar & Wubbels (2011)	Dutch	Quantitative; questionnaire with young people	Martial arts in general	Positive
7	Ziaee et al. (2012)	Iran	Quantitative; questionnaire with young athletes	Judo, Karate	Neutral on judo, ositive on karate
8	Haudenhuyse et al. (2012)	Belgium	Qualitative; observation, interviews, and focus groups with participants (15), trainers (13), and key witnesses (7)	Boxing	Neutral
9	Vertonghen & Theeboom (2012)	Belgium	Qualitative; observations and interviews with teachers	Judo, aikido, Thai boxing kick	Neutral
10	Bayansalduz (2014)	Türkiye	Quantitative; questionnaire with young people	Taekwondo	Positive
11	Vertonghen et al. (2014)	Belgium	Quantitative; questionnaire with youth and their parents	Judo, Aikido, Thai	Neutral
12	Kuśnierz et al. (2014)	Poland	Quantitative; questionnaire with Young man (150)	Capoeira, Boxing, Jiu-Jitsu	Positive
13	Bogdan Iulian & Sabina (2015)	Romania	Quantitative; questionnaire with young people	Judo	Positive
14	Asscher (2015)	Dutch	Qualitative; interviews and observations	Various martial arts	Positive, but critical on the inside implication
15	Pierce et al. (2016)	United States of America	Qualitative, interview with athletes, parents, and staff	Wrestling	Positive
16	Walker Research Group (2016)	Great Britain	Qualitative	Boxing	Positive
17	Emfield (2016)	United States of America	Qualitative; observations, interviews with athletes, parents, and staff	Self defense/ Jiu-Jitsu	Positive

Socio-Psychological Results

Antisocial and prosocial behavior is a research issue that is frequently studied in martial arts research. The study was revealed utilizing a variety of techniques, and the data was primarily based on cross-sectional survey results. As an illustration, research was done [Rutten et al. \(2011\)](#) comparing the prosocial and antisocial behavior of adolescents engaging in three different sports, one of which is taekwondo. According to the study, taekwondo practitioners do worse than those who participate in other sports in terms of behavior (morality). But the study also discovered that, in contrast to other sports, involvement in taekwondo activities had a beneficial impact on prosocial conduct in young people. In numerous other investigations, including those by [Baar & Wubbels \(2011\)](#), [Bayansalduz \(2014\)](#), [Bogdan Iulian & Sabina \(2015\)](#), [Pierce et al. \(2016\)](#), & [Vertonghen & Theeboom \(2008\)](#), this beneficial effect was also discovered. Similar findings were made by [Baar & Wubbels \(2011\)](#), who stated that this encouraging outcome was attained based on the assumption that the majority of the kids who participated in martial arts activities did not play other sports. Another study was carried out using a qualitative methodology by [Pierce et al. \(2016\)](#) and focused on the psychological activity of wrestlers who were participating in intense training camps. According to the study's findings, high-intensity training in a boot camp has a significant impact on psychological growth in the context of good conduct.

The connection between martial arts practice and aggressive behavior and emotional control is the subject of another study. A questionnaire and an analysis of prior research were used to perform this study. According to the findings of [Kuśnierz et al. \(2014\)](#), teenagers are influenced by sports that fall under the "fighting" category in martial arts activities to manage their emotions and anxieties under duress, which can lower their level of hostility. This study contrasts pupils who do not participate in martial arts activities with young people who do so in the fighting category. The differences attained are dependent on the coach's traits in the particular martial activity ([Kuśnierz et al., 2014](#)). Athletes' aggressiveness can be controlled by coaches, who can also teach them strategies for controlling their rage during competition. This was also seen in other research that found practicing martial arts improved

emotional regulation and decreased levels of aggression ([Baar & Wubbels, 2011](#); [Bayansalduz, 2014](#); [Emfield, 2016](#); [Lotfian et al., 2011](#); [Ziaee et al., 2012](#)).

[Lotfian et al. \(2011\)](#) and [Ziaee et al. \(2012\)](#) found disparities in the emotional states of karate and gambling practitioners. Judo practitioners in this study had higher emotional levels than karate practitioners. Other research has discovered that martial arts athletes exhibit an increase in resilience in addition to their degree of aggression. Teenagers that participated in wrestling training camps showed a rise in self-responsibility, according to ([Pierce et al., 2016](#)). They frequently take on greater responsibility for what has to be done and are accountable to them. [Emfield \(2016\)](#) found that ju-jitsu martial arts had a significant impact on a person's capacity to react to intimidation. Children are more assured in their ability to handle any circumstance well. Similar to the findings of the [Elling & Wisse \(2010\)](#) study, 90% of martial arts practitioners report feeling more at ease and secure in public.

Factors that influence positive behavior in martial arts

The factors influencing socially vulnerable adolescents were the subject of a study on boxing activity in Belgium by [Haudenhuyse et al. \(2012\)](#) using a qualitative method. The study found that martial arts training had no beneficial effects on a child's age-related development. Activities related to martial arts are only seen to be able to lessen the detrimental influences that practitioners' backgrounds may have on them. Families with discord, struggling parents, and uneducated parents all have an impact on this undesirable conduct. Children who engage in martial arts activities are impacted by their upbringing ([Asscher, 2015](#); [Haudenhuyse et al., 2012](#); [Vertonghen & Theeboom, 2008, 2012](#)). In this conversation, we'll examine how martial arts training functions and how the environment there affects the maturation of teenage behavior.

As previously mentioned, the coach has a significant impact on some of the consequences of young people's engagement in martial arts activities. The impact of a martial arts trainer's position has been the subject of several research studies. [Vertonghen & Theeboom \(2012\)](#) compares the conventional approach, sports education, and efficiency as the three ways used by instructors in martial arts. The coach in the conventional method

has a teaching objective. [Vertonghen & Theeboom \(2012\)](#) argue that this objective is crucial to the sports education strategy. This method views martial arts as a sport. The efficiency approach, on the other hand, emphasizes technique and the potential effectiveness of martial arts. ([Elling & Wisse, 2010](#); [Vertonghen & Theeboom, 2012](#)) did a study that looked at how different martial arts instructors teach. The method used by a coach or teacher has a big impact on how a pupil develops. [Vertonghen & Theeboom \(2012\)](#) discovered that each trainer used a different teaching approach. For instance, a trainer of kickboxing employs a strict teaching style and an efficiency approach, but a trainer of aikido or judo more frequently employs a traditional method by teaching martial arts holistically (overall). As a result, a trainer's qualities have a big impact on how martial arts practitioners grow. According to several research [Asscher \(2015\)](#), [Elling & Wisse \(2010\)](#), and [Haudenhuyse et al. \(2012\)](#), a trainer's cultural background and expertise provide them credibility in front of students. The coach's professional athletic background has an impact on how much a pupil respects his teacher. Because they are working with teens who are in a sensitive stage of identity development, coaches must have a high level of credibility ([Haudenhuyse et al., 2012](#)).

DISCUSSION

Numerous current martial arts practices have been shown to have favorable developmental outcomes in this study using both qualitative and quantitative methodologies. The amount of benefits related to martial arts training differs from diverse research findings in several ways. However, there appears to be a lot more consensus regarding the potential for martial arts practices to benefit adolescents when compared to the research done by ([Vertonghen & Theeboom, 2010](#)). The research topic during the past seven years has been in line with ([Vertonghen & Theeboom, 2010](#)) findings about the outcomes of adolescent growth. The research's main emphasis is on self-defense, aggressive, prosocial, and antisocial behaviors. According to ([Galston, 2001](#)), there is a research gap on the topic of bonding and bridging. Researchers' interest in the elements and methods that martial arts use to alter behavior has grown during the past seven years. This was described in more qualitative research, which can review martial

arts activity practices. This is crucial to understanding how martial arts should be correctly practiced ([Vertonghen & Theeboom, 2012](#)).

[Rutten et al. \(2011\)](#) did an earlier study on sports participation among teenagers. To enhance the standard of teenage sports education, research emphasizes the interaction between coaches and athletes. This study demonstrates unequivocally that the influence of martial arts training and coaching cannot be separated. This is consistent with the findings of ([Vertonghen & Theeboom, 2013](#)) investigation. Three different training/teaching methods are used by trainers or martial arts instructors: conventional, sports education, and efficiency. This study also reveals the three distinct martial arts practices. But the part of teaching that emerges is how a martial arts teacher strikes a balance between firmness and empathy. This equilibrium is a distinctive quality of martial arts and is expressed in numerous forms of martial arts. According to evidence, this is particularly helpful for adolescents' development of positive conduct. Furthermore, the trainer's experience and abilities play a huge role in developing credibility ([Haudenhuyse et al., 2012](#)). The study done by [Vertonghen & Theeboom \(2013\)](#) does not indicate the socioeconomic background of a trainer, including ethnicity and age. The history of a coach is crucial to research in other sports ([Rylander, 2015](#); [Wargo et al., 2015](#); [Zhang & Surujlal, 2011](#)).

Although there are many differences and variations in the relationships between instructors and students in each martial arts activity, it is important to highlight these differences to promote positive behavior in teenagers ([Van Dam et al., 2018](#)). Therefore, more research is required to determine how the trainer's background affects adolescents' development of good behavior. The findings of [Vertonghen & Theeboom's \(2013\)](#) study also highlight several of each martial art's traits that have not yet been fully explained. The styles and characteristics of martial arts have been disclosed by numerous studies, but the findings of these studies mainly concentrate on the trainers' teaching methods. different. According to the peculiarities of martial arts, it is still unclear how martial arts activities affect adolescents' development of positive conduct. This is noteworthy to mention, though, as the genuine sport of martial arts differs significantly from other sports in both the individual and team branches.

Previous research has examined the social background and personality traits of martial arts practitioners (Vertoghen & Theeboom, 2012). In his research, Vertoghen offers crucial details on other aspects of martial arts training that influence participants' behavior. Activities related to martial arts, however, cannot have an impact on these variables. Further research is therefore required to learn more about how martial arts activities can have a positive impact on adolescent development, even though the social background and characteristics of martial arts participants are a significant part of the ambiguity of martial arts activities related to the development of positive behavior in adolescents. should place more emphasis on easily influenced factors. Numerous aspects of martial arts activities still need to be explored, including variables like interactions between instructors and students. A fascinating study topic for future research might be the system's variable social backdrop and personal traits in martial arts activities.

The issue of the public's perception of martial arts activities has been discussed in the introduction to this study. Researchers are studying the effects of martial arts practice on a variety of facets of life as a result of the significant societal debate that has been sparked by adolescents' interest in martial arts activities. This inevitably leads to "obscurity" among the general population, especially when it comes to research findings that are only supported by a single hypothesis. Researchers run the risk of conducting research that is just concerned with positive and negative effects, or that is focused solely on hypotheses, rendering the findings unsuitable for publishing. To confirm the accuracy of the procedures, outcomes, and "mystery" in martial arts exercises, this study compares quantitative and qualitative research. Researchers found it challenging to compare the findings of earlier investigations, however, due to the wide variety of research methods utilized in those studies. Due to the lack of a more thorough meta-analysis, this study can only be considered an overview and explanation of previous studies. A comparative meta-analysis review in the future will provide more detailed and specific information about all components of martial arts exercises. A meta-analytic review is necessary when doing the study.

Conclusion

Research on the impact of martial arts training on the development of teenage behavior is yet insufficient. The researchers contend that the only method that can demonstrate this is a longitudinal analysis. The effect of martial arts instruction on teenage maturation behavior, however, has not been the subject of long-term research in the preceding seven years. Along with the research findings, the factors that affect these findings also need to be identified and further investigated. Other elements, such as peer pressure, the martial arts community, and behavior transfer into daily life, might also have an impact on how people behave when they engage in pencak silat activities. However, it is necessary to do a qualitative study once more to more accurately characterize how pencak silat activities are carried out. It is hoped that this literature review will contribute to future studies that aim to better understand the influencing elements and mechanisms at play when martial arts activities are used to encourage young people to behave well.

Conflict of Interest

Authors declare that they have no conflict of interest.

Author Contributions

Conception and Design of the Study, MNA, KK; Data Collection, MNA, KK, TM, MM; Data Analysis and Interpretation, KK and TM; Drafting the Article, MNA, KK, TM, MM. All authors have read and agreed on the published version of the manuscript.

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