HALAMAN OLAHRAGA NUSANTARA (HON)
Jurnal Ilmu Keolahragaan

Volume 8 No I
Tahun 2025

ISSN 2614-2775 (Print)
ISSN 2621-8143 (Online)

THE EFFECT OF SUPPLENESS AND AGILITY ON THE SIDE KICK ABILITY OF PENCAK SILAT ATHLETES

Fathurrahman Hafid[1], Firdaus[2]
Institut Seni Indonesia Padang Panjang[1,2]
fathur2208@gmail.com, firdausasdar39@gmail.com

Abstract
This study aims to analyze the direct and indirect effects between simultaneous flexibility on the ability of side kicks through agility in Pencak Silat athletes. The method used in this study is a quantitative method using the Path Analysis approach. The sample of this study is 25 West Sumatra pencak silat athletes. This study uses a data analysis technique with a Path Analysis approach. Based on the findings and discussions, it can be concluded that: 1) There is a significant direct influence of flexibility on the side kick ability of pencak silat athletes, 2) There is a direct and significant influence of agility on the side kick ability of pencak silat athletes, 3) There is an indirect influence of flexibility on the side kick ability through the agility of pencak silat athletes and 4) There is a significant influence between flexibility and agility simultaneously to the side kick ability of pencak silat athletes.

Keywords: Flexibility, Agility, and Side Kick

Submitted : 16th of July 2024
Accepted : 28th of September 2024
Published : 01th of November 2024
Correspondence Author: Fathurrahman Hafid, Institut Seni Indonesia Padang Panjang, Indonesia.
E-Mail: fathur2208@gmail.com

DOI http://dx.doi.org/10.31851/hon.v7i2.17065

INTRODUCTION

In the sport of pencak silat, physical condition is very necessary, be it for the competition/match category or the art category. In the match/match category, there are several important techniques that must be mastered, including stances, step patterns, evasion, parry, cuts, locks, punches, and kicks. These techniques must be trained as well as possible and supported by good physical condition (Tya Maya Ningrum et al., 2023). According to Subroto in (Wan, 2010) "Physical coaching includes elements of physical condition, namely: speed, accuracy, strength, flexibility, agility, balance, endurance, coordination, and reaction (Reaction)". The category of matches/matches in the form of the game is full body contact which uses the calculation of points using assessment table paper with the aim of making it easier to assess the accuracy of punches and kicks. Kicks have higher points than hand attacks, which are two points,

HALAMAN OLAHRAGA NUSANTARA
JURNAL ILMU KEOLAHRAGAAN
Jendral A. Yani Street Lorong Gotong Royong 9/10 Ulu Palembang South Sumatera
email jurnal: jurnalhon@univpgri-palembang.ac.id
situs web: http://www.univpgri-palembang.ac.id

while hand attacks have one point. According to (Slamet, 2003) "A kick launched by a silat fighter and goes into the target, will get a value of two". To make a kick, the athlete must be able to make a kick quickly and strongly. Because, if not fast, the opponent will easily catch the kick (Desy Tya Maya Ningrum et al., 2024). One of the kicks that is often used in pencak silat is the side kick or what is often called the T kick, because the position of the body when doing this kick forms the letter T. This type of kick is quite effective to get points in a pencak silat match.

According to (Suwirman, 2011) A side kick is a kick that is carried out by lifting the knee of the kicking foot, then the body is rotated so that the tips of the fulminare are facing outward and the soles of the feet are in line with the body (Pratama et al., 2022). Then the kick leg is straightened, the body is slightly tilted back, then the kick leg is pulled back by bending the knee and the foot is placed in the original positionAccording to (Lubis, 2004) " Side kick is an attack that uses one leg or leg, the trajectory is straight forward and its application to the heel, the sole of the foot and the outside of the sole, straight position, usually used for side attacks, with the target of all parts of the body". Side kicks can be used as weapons for silat fighters because they contain the maximum strength element of the overall strength of the limbs. As mentioned earlier, this side kick requires several components of good physical condition, including flexibility and agility (Putra et al., 2020). Flexibility plays a huge role in learning movement skills to optimize other physical abilities. Flexibility is related to the ability to function joints/wrists such as shoulder joints, knees, feet, hips, wrists, and ankles so that flexibility is an important factor in achieving achievements in every sport, especially in sports that require a lot of joint movement, such as football, gymnastics, pencak silat, wrestling, athletics, sports games, and so on. (Sukadiyanto, 2011) explained that players who are flexible will have advantages, namely 1) making it easier for athletes to display their movement and skills, 2) avoiding injuries during physical activities, 3) allowing them to perform extreme movements, and 4) smoothing blood flow so that it reaches the muscle fibers. So it is stated that the better the flexibility of a silat fighter, the better the quality of the kick produced. Then agility, in side kicks agility is very

HALAMAN OLAHRAGA NUSANTARA
JURNAL ILMU KEOLAHRAGAAN
Jendral A. Yani Street Lorong Gotong Royong 9/10 Ulu Palembang South Sumatera
email jurnal: jurnalhon@univpgri-palembang.ac.id
situs web: http://www.univpgri-palembang.ac.id

necessary, because when doing a side kick, a silat fighter must return his body posture to a position ready to receive an attack or attack again.

(Daualy, 2016) stated that in pencak silat the elements of physical condition agility are very important, in addition to being supported by other elements of physical condition. Agility is needed by a silat fighter because it greatly determines the success in launching attacks, dodging punches or even the ability to dodge attacks and then counterattack. In this case, good agility is very necessary for a fighter. According to (Akhmad, 2013) Agility is the ability of a person to change the direction and position of his body quickly and precisely when moving, according to the situation faced in a certain arena without losing the balance of his body. (Arsil, 2011) stated, "Agility is the ability of athletes to change their body position and direction as quickly as possible according to the desired". The direct uses of agility are to: 1) coordinate multiple movements, 2) make it easier to practice high techniques, 3) movements can be efficient and effective, 4) facilitate orientation and anticipation of opponents and the competition environment, and 5) avoid injury.

METHOD

The method used in this study is a quantitative method using the Path Analysis approach, which uses a structural equation that looks at the causality of the dimensions of the influence of Flexibility (X_1), Agility (X_2) on Side Kick Ability (Y). This study was conducted to see whether or not there is a direct and indirect influence of causal variables on causal variables through the use of the Path Analysis method. The instrument used to measure flexibility is using the side split test, to measure agility using the side step test and the instrument used to measure the ability of the side kick is the Side Kick Ability Test.

RESULTS AND DISCUSSION

Testing of this hypothesis will be carried out using a path analysis approach using the SPSS version 21 program, the results of the analysis of the variables of Flexibility (X_1), Agility (X2), and Side Kick Ability (Y) will be presented as follows:

HALAMAN OLAHRAGA NUSANTARA
JURNAL ILMU KEOLAHRAGAAN
Jendral A. Yani Street Lorong Gotong Royong 9/10 Ulu Palembang South Sumatera
email jurnal: jurnalhon@univpgri-palembang.ac.id
situs web: http://www.univpgri-palembang.ac.id

The direct effect of flexibility on the side kick ability of Pencak Silat athletes.

Individual tests carried out by X2 on Y found that the coefficient result of the ρYX2 pathway = 0.456. Based on the results of the analysis, it was obtained that the value of sig = 0.09 is smaller than the probability value of α = 0.05, the value is 0.009< 0.05, then in this case Ho is rejected and Ha is accepted, which means that the coefficient of path analysis is significant. So flexibility has a direct effect on the Ability of Side Kicks performed by Pencak Silat athletes. The magnitude of the influence of Suppleness on the Side Kick Ability of Pencak Silat athletes is as follows: = ρ_{yx22} x 100 = 0.4562 x 100 = 20.79%. The effect of flexibility on the Ability of Side Kicks of Pencak Silat athletes was 20.79%. While the remaining 79.21% was influenced by other factors.

The direct effect of agility on the side kick ability of pencak silat athletes.

Individual tests carried out X3 on Y obtained that the coefficient result of the ρYX3 path = 0.274. Based on the results of the analysis, it was obtained that the value of sig = 0.048 is smaller than the probability value of α = 0.05, the value of 0.048< 0.05 then in this case Ha is accepted and H0 is rejected which means the coefficient of the path analysis is significant. So, agility has a direct effect on the Side Kick Ability performed by Pencak Silat athletes. The magnitude of the effect of agility on the Side Kick Ability of Pencak Silat athletes is as follows: = ρ_{yx32} x 100 = 0.2742 x 100 = 7.51%. The effect of agility on the Side Kick Ability of Pencak Silat athletes was 7.51%. While the remaining 92.49% is influenced by other factors.

Indirect Effect of Flexibility on Side Kick Ability through Agility of Pencak Silat Athletes

Based on the results of the analysis test of the variable of Flexibility on Side Kick Ability through Agility in Pencak Silat athletes, it was found that the effect of Flexibility on Side Kick Ability through agility was 0.544 or 29.59%.

The Effect of Suppleness and Agility on the Side Kick Ability of Pencak Silat Athletes

Based on the results of the analysis, the value of Rsquare = 0.746 was obtained and from the Table Annova obtained F = 8.532 with probability (sig) = 0.015, because the sig value <α = 0.05 then the decision is that Ho is rejected and Ha is accepted, so flexibility, and agility have a simultaneous effect on the Side Kick Ability of Pencak

HALAMAN OLAHRAGA NUSANTARA
JURNAL ILMU KEOLAHRAGAAN
Jendral A. Yani Street Lorong Gotong Royong 9/10 Ulu Palembang South Sumatera
email jurnal: jurnalhon@univpgri-palembang.ac.id
situs web: http://www.univpgri-palembang.ac.id

Silat athletes. Path equation of the variables of Flexibility and Agility to Side Kick Ability (X1 and X_2 to Y) using the formula: (Riduwan & Engkos 2012: 292) Where $\rho y\varepsilon Y = \rho_{YX1}X_1 + \rho_{YX2}X_2 + \rho_Y\varepsilon_1$ $_1$ = 1-R2YX12 = 1 - 0.746 = 0.254 Thus the path equation is Y = 0.471X1 + 0.456 X2 + 0.254ε_1. The magnitude of the Rsquare number is 0.446. This number shows that the magnitude of the influence of Flexibility, and agility on the Side Kick Ability of Pencak Silat athletes is: KD = r2 x 100% = 0.746 x 100% = 55.65%. The effect of Flexibility, and Agility on Side Kick Ability is 55.65%. While the remaining 44.35% was influenced by other factors.

DISCUSSION

The direct effect of flexibility on the ability of side kicks of pencak silat athletes.

Flexibility is the ability to carry out movements with a large amplitude or the quality of a segment moving as much as possible according to the possibility of movement (range of movement). This quality allows muscles or groups of muscles to be in the maximum short position and maximum length by making maximum use of the joints. With good flexibility, the possibility of injury while playing will be reduced. According to Lutan et al. (2005:57) stated that "flexibility is the ability of a person to be able to move with the widest possible space of motion in the joints". "Suppleness is the ability of the body to perform exercises with a large or wide amplitude of movement", Syafruddin (2011:113). Suppleness is highly dependent on muscle elasticity. The more elastic the muscles around the joint, the better the flexibility. The better the level of flexibility, the less likely it is to be injured. In pencak silat, flexibility plays a very important role. One of the techniques that requires flexibility in pencak silat is the side kick. Suppleness makes it easier for a silat player to take a kick and makes a fighter's movements more flexible so that it is not easy for the opponent to fall and also reduces the risk of injury when taking a kick. In this regard, Sukadiyanto (2011:137) explained that players who are flexible will have advantages, namely 1) making it easier for athletes to display their movement and skills, 2) avoiding injuries during physical activities, 3) allowing them to be able to perform extreme movements, and 4) smoothing blood flow so that it reaches the muscle fibers.

HALAMAN OLAHRAGA NUSANTARA
JURNAL ILMU KEOLAHRAGAAN
Jendral A. Yani Street Lorong Gotong Royong 9/10 Ulu Palembang South Sumatera
email jurnal: jurnalhon@univpgri-palembang.ac.id
situs web: http://www.univpgri-palembang.ac.id

From the results of research that has been carried out on the flexibility variable for Side Kicks, it was found that there is a direct influence of flexibility (X2) on Side Kick Ability (Y). This can be seen in the Coffesient Table which shows an influence of ρYX2 = 0.456. Based on the results of the calculation carried out using the SPSS.17 program, the value of sig = 0.021 is obtained which is smaller than the probability value of α = 0.05, the value of 0.009< 0.05, then in this case Ha is accepted and H0 is rejected which means the coefficient of the path analysis is significant. So, flexibility has a direct effect on the Side Kick Ability performed by Pencak Silat athletes. From the findings, side kicks really need flexibility. With perfect flexibility, the expected speed will be carried out well, so that it will produce maximum side kicks as well. Suppleness is needed for leg flexion and hip thrust to move flexibly and produce maximum side kick ability. Therefore, flexibility is needed when kicking so that it plays an important role in side kicks. Thus, flexibility affects the side kick.

The direct effect of agility on the side kick ability of pencak silat athletes.

Agility plays a very important role in the side kick ability of pencak silat athletes. The better the agility that the athlete has, the better his kicking ability will be. When after making a strong and fast side kick hitting the target, a silat fighter must return his body to a position that is ready to receive an attack or attack again. Here it is very necessary to be agile for a pencak silat athlete in doing side kicks. (Baley and James A. 1986: 199) states "The formula for momentum is mass multiplied by velocity". An athlete's body mass is relatively constant but speed can be increased through a training program and muscle development. Among athletes of the same weight (same mass), athletes who have stronger muscles in agility will have the upper hand. Agility can usually be seen from the ability to move quickly, change direction and position, avoid attacks from opponents during competition. The ability to move changes direction and position depending on the situation and conditions faced in a relatively short and fast time.

The agility carried out by athletes or pencak silat athletes when practicing or competing also depends on the ability to coordinate the body movement system with

HALAMAN OLAHRAGA NUSANTARA
JURNAL ILMU KEOLAHRAGAAN
Jendral A. Yani Street Lorong Gotong Royong 9/10 Ulu Palembang South Sumatera
email jurnal: jurnalhon@univpgri-palembang.ac.id
situs web: http://www.univpgri-palembang.ac.id

the response to the situation and conditions faced. Agility is determined by the speed factor of reacting, the ability to master the situation and being able to control sudden movements.

From the results of research that has been conducted on the variable of agility to Side Kick, it was found that there is a direct influence of agility (X_3) on the Ability of Side Kick (Y). This can be seen in the Coffesient Table which shows an influence of ρ_{YX3} = 0.274. Based on the results of the calculation carried out using the SPSS.17 program, the value of sig = 0.048 is obtained which is smaller than the probability value of α = 0.05, the value of 0.048< 0.05, then in this case H_a is accepted and H_0 is rejected which means the coefficient of the path analysis is significant. So, agility has a direct effect on the Side Kick Ability performed by Pencak Silat athletes.

Indirect Effect of Flexibility on Side Kick Ability Through Agility of Pencak Silat Athletes

In pencak silat, flexibility plays a very important role. One of the techniques that requires flexibility in pencak silat is the side kick. Suppleness makes it easier for the fighter to kick and makes the movement of a silat fighter more flexible so that it is not easy for the opponent to knock down and also reduces the risk of injury when making a kick. In this regard, Sukadiyanto (2011:137) explained that players who are flexible will have advantages, namely 1) making it easier for athletes to display their movement and skills, 2) avoiding injuries during physical activities, 3) allowing them to be able to perform extreme movements, and 4) smoothing blood flow so that it reaches the muscle fibers.

In doing side kicks, flexibility is needed so that the kick made can reach the expected target with less risk of injury. In matches, flexibility also functions so that side kicks are not easily anticipated by the opponent. Side kicks, which in practice require hip thrust and leg muscles and joints, are very much in need of flexibility. Furthermore, agility is very useful in kick speed. In the ability of side kicks, agility and flexibility are needed when performing strong, fast, powerful and on target side kicks.

Based on the previous findings, the direct effect of flexibility with side kicks was found to be 0.456 or 20.79%, while the effect of agility with side kicks was found to

HALAMAN OLAHRAGA NUSANTARA
JURNAL ILMU KEOLAHRAGAAN
Jendral A. Yani Street Lorong Gotong Royong 9/10 Ulu Palembang South Sumatera
email jurnal: jurnalhon@univpgri-palembang.ac.id
situs web: http://www.univpgri-palembang.ac.id

be 0.2741 or 7.51%, while the effect of flexibility on Side Kick Ability through agility was 0.544 or 29.59%. This means that if these two variables are integrated, the influence obtained is quite significant. It can be interpreted that flexibility through agility has a greater influence on the side kicks made by Pencak Silat athletes.

Simultaneous Effect of Flexibility, Agility on the Ability of Side Kicks of Pencak Silat Athletes Kuciang Putiah Harimau Campo Padang Panjang.

From the results of the research that has been carried out on the variables of flexibility, agility and side kicks carried out by Pencak Silat athletes, it was found that there was a simultaneous influence of flexibility (X_1) and agility (X_2) on the ability of side kicks (Y) obtained R_{square} = 0.446 or there was an influence of 55.65% so that H_o was rejected and H_a accepted, where there is a simultaneous influence between Influence, Suppleness and Agility on the Side Kick Ability of Pencak Silat athletes.

Agility and flexibility affect the ability of side kicks. In theory, an athlete with good agility not only displays perfect skills, but also quickly solves an unexpected training task. As well as agility is affected by the level of development of biomotor abilities, such as strength, speed, endurance, flexibility, and coordination.

Based on the assumption above, it can be interpreted that the three elements are a unit that supports each other in the ability of side kicks. Good flexibility and agility have a significant influence on the ability of the side kick, moreover, these three elements are combined simultaneously without closing the possibility that the result of the simultaneous integration of these three variables is very strong and meaningful in the ability of the side kick. Side kicks are very suitable for long-distance fights, and for silat fighters who have long legs, it is very selective to use because the range is definitely longer. If pencak silat athletes make kicks with high flexibility and agility, it will produce strong, fast and accurate kicks on target so that athletes will get landslide points during the match and the opponent will have difficulty anticipating the kick. This also determines the achievements of a pencak silat athlete. So flexibility and agility affect the ability of the side kick of pencak silat athletes.

HALAMAN OLAHRAGA NUSANTARA
JURNAL ILMU KEOLAHRAGAAN
Jendral A. Yani Street Lorong Gotong Royong 9/10 Ulu Palembang South Sumatera
email jurnal: jurnalhon@univpgri-palembang.ac.id
situs web: http://www.univpgri-palembang.ac.id

CONCLUSION

Based on the results of data analysis and discussion that has been explained in the previous chapter, the following conclusions can be drawn:There is a significant direct effect of flexibility on the Side Kick Ability of pencak silat athletes, There is a direct and significant influence of agility on the Side Kick Ability of pencak silat athletes, There is an indirect effect of flexibility on the Ability of Side Kicks through the agility of pencak silat athletes, There was a significant influence between flexibility and agility simultaneously on the Side Kick Ability of pencak silat athletes.

REFERENCES

Akhmad,I., (2013), Dasar-Dasar Melatih Fisik Olahraga.UNIMED Press, Medan

Arsil. (1999). *PembinaanKondisiFisik*. Padang: FIK UNP

Azmi, Fachrul.(2015). *variabel-variabel Penelitian.* Diakses dari https://acehsport1.blogspot.com. Diakses 3 Agustus 2018

Daulay .(2016).*Pengaruh Latihan SAQ Terhadap Hasil Tendangan Samping Olahraga Pencak Silat.* Jurnal. Pedagogik keolahragaan.

Desy Tya Maya Ningrum, Hafizah, Decenni Amelia, Yafi Velyan Mahyudi, Eldin Maulana, & Rizqia. (2024). Introduction of Fundamental Movement Skill (FMS) in Elemnetary School. *GANDRUNG: Jurnal Pengabdian Kepada Masyarakat*, *5*(1), 1408–1416. https://doi.org/10.36526/gandrung.v5i1.3520

Kementrian Negara Pemuda dan Olahraga RI No 3 Th 2005 Tentang System KeolahragaanNasional

Lubis. Johansyah. (2004). *Instrument Pemanduan Bakat Pencak Silat* Jakarta: DitjenDiktiDepdiknas

---------- (2004). Pencak Silat Edisi Kedua: Jakarta.

Pratama, R. R., Arisman, A., Marta, I. A., Okilanda, A., & Putra, D. D. (2022). Zig-Zag Run in Improving Basketball Dribbling Skills. *Halaman Olahraga Nusantara (HON)*, *5*(II), 405–413. https://doi.org/http://dx.doi.org/10.31851/hon.v5i2.7719

Putra, D. D., Okilanda, A., Arisman, A., Lanos, M. E. C., Putri, S. A. R., Fajar, M., Lestari, H., & Wanto, S. (2020). Kupas Tuntas Penelitian Pengembangan Model Borg & Gall. *Wahana Dedikasi : Jurnal PkM Ilmu Kependidikan*, *3*(1), 46. https://doi.org/10.31851/dedikasi.v3i1.5340

Riduwan & Kuncoro, E. (2012). Cara Menggunakan dan Memakai Path Analysis. Bandung. Alfabeta.

Sugiyono. (2005). *Metote Penelitian Administrasi*. Bandung: Alfabeta.

Suharno HP. 1993. *Metodologi Kepelatihann Olahraga.* Yogyakarta : Fakultas Pendidikan Olahraga dan Kesehatan. Institut Keguruan dan Ilmu Pendidikan

HALAMAN OLAHRAGA NUSANTARA
JURNAL ILMU KEOLAHRAGAAN
Jendral A. Yani Street Lorong Gotong Royong 9/10 Ulu Palembang South Sumatera
email jurnal: jurnalhon@univpgri-palembang.ac.id
situs web: http://www.univpgri-palembang.ac.id

Suwirman(2011). *Pencak Silat Dasar*. Padang: FIK UNP

Syafruddin. (2012). *Ilmu Kepelatihan Olahraga*. Padang: FIK Universitas Negeri Padang.

_____. (1999). Dasar-dasar Kepelatihan Olahraga. Padang: FIK Universitas Negeri Padang.

----------. (2011). Ilmu Kepelatihan Olahraga (Teori dan Aplikasinya Dalam Pembinaan Olahraga): Padang.

Tya Maya Ningrum, D., Velyan Mahyudi, Y., Prayogo, G., Dwiansyah Putra, D., & Winarno, M. (2023). Diseminasi Aktivitas Fisik Menuju Kebugaran Peserta Didik SMK. *Universitas Bhayangkara, Bekasi*, *6*(2), 2–9. http://dx.doi.org/10.31851/dedikasi.v6i2.13619