

## Case Series

# Su Jok therapy by twist and seed method of therapy to reduce the level of fear on COVID-19's patient: a case series

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## ABSTRACT

Patients with COVID-19 not only experience suffering from physiological symptoms but also psychological dimensions such as fear. Fear is part of life and the threat of self-existence will increase the fear level. Increased levels of fear will influence the process of healing by disturbing the immunity function. This case series reports the results of Su Jok therapy using the twist and seed method of therapy in reducing the level of fear of patients with COVID-19. Twenty cases of respondents with the average level of fear toward COVID-19 of  $\geq 4$  were included in this case reports. Fear level was measured by using the fear scale measurement (FSM). Su Jok therapy was conducted by twisting (120 times) and putting fenugreek seed on the joint of the patients' index finger in Triorigin fixed joint correspondent of fear. Posttest of fear scale was measured after intervention in the intervals 5, 10 and 15 minutes. In all three interval measurements, there were significant improvements in the fear scale before and after Su Jok therapy ( $p=0.0001$ ,  $p<0.05$ ).

**Keywords:** Su Jok therapy, Fear, COVID-19

## INTRODUCTION

COVID-19 primarily attacks and causes symptoms in the respiratory system.<sup>1,2</sup> Since the disease is very contagious, it has spread very quickly around the world, initially, research found that transmission mainly occurred from human to human.<sup>3</sup>

The effect of this potentially deadly virus has also impacted on psychological aspects, for example, causing panic disorder, anxiety and depression.<sup>4</sup> Another emotional aspect which does not receive enough attention and needs to be explored is the feeling of fear. 'Fear' is a complex term which consists of many interpretations.<sup>5</sup>

Fear mostly refers to the subjective condition, and to the feeling when someone feels threatened.<sup>6</sup> Fear is not always bad because as a reaction to danger, it may be required for people to survive and it is also considered as a safety tool or survival mechanism for people to protect themselves.<sup>5</sup> Fear, however, if very intense and continuously experienced, will disturb people's daily life activities.<sup>5</sup>

Physically, fear can overload the hypothalamus-pituitary-adrenal axes which will create fatigue and destroy the coordination of most body systems that is ruled by the autonomic nerves.<sup>5</sup> Fear also tends to cause migraine headaches, stomach discomfort, fibromyalgia and other symptoms.<sup>5</sup> For patients who are already infected by COVID-19, fear can contribute to the progression of the

illness, because intense fear will contribute to immunity dysfunction, cardiovascular disease, chronic disease, depression and anxiety.<sup>5</sup>

The strength of a person's immunity system is very important in protecting individuals to survive against the COVID-19 attack. This immunity is, however, influenced by the feeling of fear. Thus, reducing fear is important to be considered for patients with COVID-19. There are several different methods known to reduce fear. One method that may reduce fear is by the Su Jok therapy using the twist and seed method of therapy.

Su Jok is a complementary alternative therapy which originated from South Korea, and developed by professor Park Jae Woo, who published Su Jok therapy firstly in 1987. Su Jok is a term used in the Korean language. Su means hand and Jok is foot. Referring to the terminology, the therapy is applied on the hands or feet with different methods, such as putting color, seed, acupuncture, twist and other manipulations.<sup>7</sup>

Most publications concerning the effects of Su Jok therapy focus on physical dimensions such as fatigue and weakness, heel pain, asthma, migraine, rehabilitation of stroke patients, and pain in the elbows, while Su Jok has also been proven to reduce the scale of pain.<sup>8-14</sup>

Although Su Jok is able to help with psychological problems, there is no literature found in English that has been published regarding how effective can be Su Jok in reducing psychological problems, such as fear. Because Su Jok can be considered as an easy method of therapy and also provides a quick result, it is important to explore the benefits of Su Jok for psychological problems, specifically for reducing the feelings of fear. The aim of this study was to reduce the fear scale of patients with COVID-19 by using Su Jok therapy through the twist and seed method of therapy.

**CASE SERIES**

This case series involved twenty patients who were confirmed positive with COVID-19 in the inpatient unit in General Hospital Tirtonegoro Klaten, Central of Java, Indonesia. All twenty patients experienced fear with score of  $\geq 4$  as the average of the fear scale measurement (FSM) total score which is considered as severe anxiety (restlessness).

Level of fear was measured using the FSM, which is an instrument designed to measure the general feeling of fear and in this study the object of fear was COVID-19. FSM was previously tested for validity and reliability among 55 respondents who completed the FSM through an online survey three times with 5 minutes intervals. Since this instrument was considered as Thurstone scale, the validity was measured by using analysis of variance (ANOVA) repeated measurement with the results of  $F=12, 6$  and significance  $\leq 0.286$ , which means that there was no

difference in the scale results in the 0, 5 and 10 minutes measurements indicating that the instrument is valid.<sup>15,16</sup> Meanwhile, the intraclass correlation coefficient (ICC) score was 0.98 which means that the FSM instrument is reliable.

The higher score of FSM means the feeling of fear was increased. For applicability of the usage of FSM, the score can be added for each item of the questionnaire and then it is divided by 7 and the average of score can be divided into 10 levels refer to the level of fear based on the fear spectrum: 0-1=calmness, 2=mild anxiety (nervousness), 3=moderate anxiety (vigilance), 4=severe anxiety (restlessness), 5=mild stress (tense), 6=severe stress (distress), 7=mild fear (fright), 8=severe fear (dread), 9=terror, and 10=panic.<sup>17</sup>

Patients received Su Jok Therapy provided by nurses who were already trained by a Su Jok therapist certified by the International Su Jok Association (ISA). The measurement of the FSM was conducted before and after therapy as many as three times with 5 minutes interval.

Su Jok therapy was conducted by twisting (120 times) (Figure 1) and putting fenugreek seed (Figure 2) on the joint of the index finger in the Triorigin fixed joint correspondent of fear. This intervention only needs approximately three minutes to be finished.

Wilcoxon signed rank test was used to analyze the difference in the scale of fear before and after intervention in three intervals: 5, 10 and 15 minutes. The result was considered significant if the p value was  $< 0.05$ .

The total cases were 11 male and 9 female patients. Table 1 below shows the distribution of gender and age. Meanwhile, the distribution of fear scale before and after the intervention in 5, 10 and 15 minutes intervals can be seen in Table 2, and Figure 3. The results of analysis using Wilcoxon signed rank test to the scale before and after therapy in interval of 5 minutes can be seen in Table 3.

**Table 1: Sample characteristics.**

Characteristics	Frequency	Percentage
<b>Sex</b>		
Male	11	55
Female	9	45
<b>Age (years)</b>		
20-30	1	5
31-40	8	40
41-50	2	10
51-60	6	30
>60	3	15

Using Wilcoxon signed rank test to compare the scale before and after therapy in all different intervals, the results of analysis showed p value was 0.0001, which was  $< 0.05$  and considered statistically significant. Results also

showed as many as 11 respondents explained about why they felt fear of COVID-19 which are because of: loss of freedom because of isolation, afraid to transmit the virus to other people, fear of death, fear the result of test still

positive, fear of being isolated from people, fear to be alone, fear of news about COVID-19 and fear they are unable to recover.

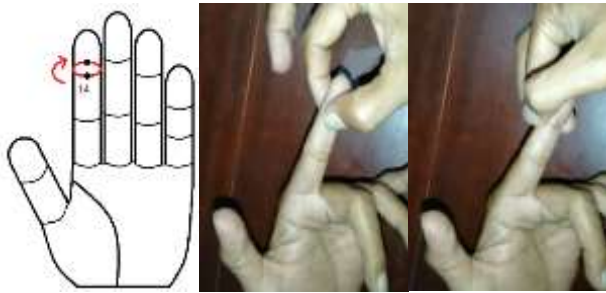
**Table 2: Respondents' fear level based on fear spectrum.**

Respon -dents	Before intervention		Fear scale					
			Minutes after intervention					
	Scale	Meaning	5	10	15	Scale	Meaning	Scale
1	8	Severe fear (dread)	5	Mild stress (tense)	4	Severe anxiety (restlessness)	2	Mild anxiety (nervousness)
2	5	Mild stress (tense)	4	Severe anxiety (restlessness)	3	Moderate anxiety (vigilance)	2	Mild anxiety (nervousness)
3	5	Mild stress (tense)	3	Moderate anxiety (vigilance)	2	Mild anxiety (nervousness)	1	Calmness
4	6	Severe stress (distress)	4	Severe anxiety (restlessness)	2	Mild anxiety (nervousness)	1	Calmness
5	5	Mild stress (tense)	4	Severe anxiety (restlessness)	2	Mild anxiety (nervousness)	2	Mild anxiety (nervousness)
6	5	Mild stress (tense)	4	Severe anxiety (restlessness)	3	Moderate anxiety (vigilance)	2	Mild anxiety (nervousness)
7	5	Mild stress (tense)	4	Severe anxiety (restlessness)	2	Mild anxiety (nervousness)	1	Calmness
8	5	Mild stress (tense)	3	Moderate anxiety (vigilance)	2	Mild anxiety (nervousness)	1	Calmness
9	5	Mild stress (tense)	4	Severe anxiety (restlessness)	3	Moderate anxiety (vigilance)	1	Calmness
10	6	Severe stress (distress)	4	Severe anxiety (restlessness)	4	Severe anxiety (restlessness)	3	Moderate anxiety (vigilance)
11	6	Severe stress (distress)	4	Severe anxiety (restlessness)	4	Severe anxiety (restlessness)	3	Moderate anxiety (vigilance)
12	5	Mild stress (tense)	4	Severe anxiety (restlessness)	3	Moderate anxiety (vigilance)	3	Moderate anxiety (vigilance)
13	5	Mild stress (tense)	5	Mild stress (tense)	4	Severe anxiety (restlessness)	4	Severe anxiety (restlessness)
14	4	Severe anxiety (restlessness)	4	Severe anxiety (restlessness)	3	Moderate anxiety (vigilance)	3	Moderate anxiety (vigilance)
15	5	Mild stress (tense)	4	Severe anxiety (restlessness)	4	Severe anxiety (restlessness)	4	Severe anxiety (restlessness)
16	5	Mild stress (tense)	4	Severe anxiety (restlessness)	4	Severe anxiety (restlessness)	4	Severe anxiety (restlessness)
17	5	Mild stress (tense)	4	Severe anxiety (restlessness)	4	Severe anxiety (restlessness)	3	Moderate anxiety (vigilance)
18	8	Severe fear (dread)	8	Severe fear (dread)	8	Severe fear (dread)	7	Mild fear (fright)
19	7	Mild fear (fright)	7	Mild fear (fright)	7	Mild fear (fright)	6	Severe stress (distress)
20	5	Mild stress (tense)	1	Calmness	0	Calmness	0	Calmness

**Table 3: Wilcoxon signed rank test result before and after Su Jok therapy (n=20 samples).**

Time measurement after intervention (T) – in minutes, from 0 to 15	Percentage of reducing level of fear	Z Wilcoxon rank test	P value	Result
T0 - T5	95.0 (19 from 20)	3.808	0.0001*	Significant
T0 - T10	100.0 (20 from 20)	3.920	0.0001*	Significant
T0 - T15	100.0 (20 from 20)	3.920	0.0001*	Significant
T5 - T10	95.0 (19 from 20)	3.902	0.0001*	Significant
T5 - T15	100.0 (20 from 20)	3.920	0.0001*	Significant
T10 - T15	85.0 (17 from 20)	3.817	0.0001*	Significant

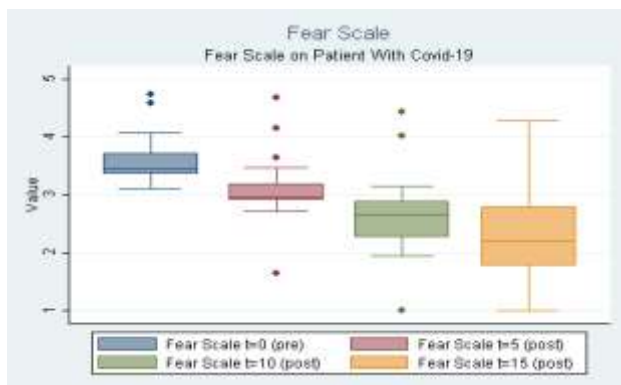
\*P value <<0.01 (less than 0.05)



**Figure 1: trirangin fixed joint correspondent of fear (joint number 14).**



**Figure 2: Put seed on the trirangin fixed joint correspondent of fear (joint number 14).**



**Figure 3: Fear scale among patients with COVID-19 before and after intervention.**

## DISCUSSION

In this study, most respondents are in the range of 31-40 years of age and this is different compared to one study conducted in Georgia.<sup>18</sup> Additionally, the gender proportion of the participants was also different in the Georgia study.<sup>18</sup>

The inclusion criteria of respondents in this study had minimal average rate of FSM score 4. In this study, from the range 0-10, the highest fear score was 8. Based on a previous study this level of fear is considered as severe fear (dread). Based on level 7-8, this level of fear is categorized as part of primitive emotion fear itself and is referred to as a primary human instinct.<sup>17</sup>

Currently, there is still some debate about how to classify the level of fear. Meanwhile, several theories state that fear can be divided into two parts, namely fear and panic, based on the neurofunctional theory.<sup>19</sup> In one theory called the modular theory, fear can be divided into phobias.<sup>20</sup> Another theory is the dimensional theory, in which fear can be classified by the arousal and valence for the each of its dimensions.<sup>2</sup> In the adaptive theory, as the last theory, fear is broken down into an instance of a more basic and broader system process.<sup>6</sup>

One reason that may answer why fear can be reduced is because fear is considered as a condition that is adaptable, and it can be changed based on the condition in dealing with the threatening stimuli.<sup>21</sup> This explanation means that, when someone feels afraid, he/she feels is afraid because of the risk he/she must face, and if the risk is high, then the feeling of fear will be stronger.<sup>17</sup>

Adolphs furthermore mentioned that the level of fear because of physical danger and life threatening condition will increase the fear level compared to financial risk and the perceptions related to the risk.<sup>21</sup> The evidence found in this study indicated that the fear was caused by feelings of being threatened and the danger to a person's self-existence such as fear of unrecovered illness, fear to cause disease transmission in which other people will also be infected and other barriers limiting the basic needs of socialization because of physical isolation.

The results show that Su Jok statistically was successful in reducing the level of fear in the scale. The results also showed that one respondent could reach calmness after the intervention. Based on Ntokos, calmness means peace in a person's mind without agitation as well as diminished excitement.<sup>17</sup> In this study the highest level of fear after 15 minutes of intervention was level 3 (40%). This level based on Ntokos is dominated by the anxiety feeling.<sup>17</sup> Although after 15 minutes not all respondents stated they had reached calmness, but the trend from 5, 10 and 15 minutes continued to drop. It is expected that their level of fear will reach calmness after more than 15 minutes. This study, however, did not measure their level of fear more than 15 minutes. Considering the simple method of the therapy and also the less effort for doing the therapy, this statistically significant decreasing level of fear is considered as a quick result.

Recent research was conducted to reduce stress and improve well-being of clinical staff who were working in COVID-19 wards. The variables in this study were tiredness, sadness, fear and worry measured before and after the intervention. The duration of the intervention was a 5-week period. There was also significant variation and improvement of the clinical staff emotional status.<sup>22</sup> Compared to our study, in which the therapy was only done for about three minutes, the previous studies was done for a long time period and took much effort.

Compared to other interventions in the published literature, Su Jok therapy by using the twist and seed method of therapy in this research is the quickest process therapy and also has the quickest result of therapy. The therapy in this study only needed about 3 minutes to complete and the level of fear was reduced significantly within 5, 10 and 15 minutes.

There are different theories considered as the basis of Su Jok therapy. One theory published by Prof Park Jae Woo was the Triorigin theory.<sup>23</sup> In this theory, there are four basic forces in the universe which are Hetero (He), Homo (Ho), Neuto (Ne) and Neuto (No).<sup>23</sup> Each of the forces have their own characteristic and role and these forces are involved in the process of creation, operation and destruction activity in the universe. Everything in the universe also can be assigned into those forces.<sup>23</sup>

Hetero is a term that comes from Greek with the meaning of 'different' and gives a sense of changes in everything, while Homo also from Greek is from the word 'homoios' that has the meaning of the same, or similar, and energy that makes something to not change. The third force is neutro which comes from the Latin word 'neutrum' which means 'not this and not that', and it has the characteristic to control Homo and Hetero and to push a balance in the universe.<sup>23</sup> The homo and hetero concept is similar with the Yin and Yang concept in Chinese medicine.<sup>23</sup> The fourth force in the universe is neutro (No). This neutro force is invisible, universal and it is a force that existed before the other forces (hetero, homo, neutro) emerged.<sup>23</sup> Neuto

is not always invisible in the real world, does not connect directly to what is happening in the real world and this force lets everything happen through the natural flow.<sup>23</sup>

Based on the Triorigin theory, those forces also can be assigned into the body, including our hands, fingers and knuckles. In the Triorigin theory, humans consist of four elements or forces which are mind, body, life and soul. Mind has the hetero characteristic, body has the homo characteristic, while life has the neutro characteristic and soul has the neutro characteristic.<sup>23</sup>

Mind can also be divided into four forces again which are emotion (hetero characteristic), reason (homo characteristic), intention (life characteristic) and spirit (neuto characteristic).<sup>23</sup> The division is also continued in the emotion element, in which emotion can be divided again into four groups which are: the hetero emotion group, homo emotion group, neutro emotion group, and wonder as a neutro emotion. Fear as the focus of this research belongs to the homo emotion group.<sup>23</sup> Understanding information concerning which emotion belongs to which group will help in providing guidance for the therapy.

The forces also can be seen in our body, as well as in our hands and feet. Each part of our body can be accessed through specific points in the hands and feet.<sup>7</sup> Furthermore, our hands and feet are not just representations of the physical body but also provide a map or atlas in the level of energy.<sup>24</sup> Emotion is not part of the physical dimension, but is beyond the physical dimension, or it can be called as metaphysical dimension. For an easy explanation, emotion is a kind of energy, and this energy can also be identified as a representation in our hands and feet, based on Triorigin theory. Thus, the fear emotion can be found in the first knuckle under the nail of index finger on both hands.<sup>23</sup> Consider how a nervous person will fidget with their fingers or bite their finger nails when they are anxious in their life.

There are many methods in Su Jok therapy for example, using massage therapy, color therapy, seed therapy, twist therapy, needle therapy and also other methods.<sup>7</sup> In this study, the researchers chose to use the twist and seed therapy. Twist therapy is 'one of the methods of therapeutic exercise allowing to prevent and treat disease by performing twisting motions (twist) of target body parts'.<sup>25</sup>

Twist can be done in all areas of the body, and also in the correspondent points of the body in the Su Jok map. Based on the literature, twist therapy points related to fear are the neck twist, jaw twist, eye twist, head axis twist, hip twist, sacrum and coccyx twist.<sup>25</sup> However, the researchers chose to do therapy on the knuckle of the finger because it is easier to be done and more convenient for patients with COVID-19. The knuckle of the finger that refers to the fear feeling is on the knuckle under the nail in the index finger

and in this study, the researchers did therapy on the left hand of each respondent.<sup>23</sup>

The direction of twist therapy is very important, as a means to tonify (increase/make it stronger) or to sedate (to decrease/make it weaker) the fear emotion. In some conditions, fear needs to be increased because if someone does not have fear at all, it will cause he/she in taking unnecessary risk that may threaten his/her existence. In this study, however, the researchers needed to reduce the fear level of the patients with COVID-19.

To sedate the fear level, the direction of the twist therapy is to the thumb, since energy flows from the neutro point to the hetero point of this knuckle. Sedation was done by twisting in an anticlockwise direction of the energy flow.<sup>23</sup>

The mechanism in which twist will work on reducing fear can be explained through professor Park Jae Woo's explanation in his book. The twist motion will generate a spiral network which has the neutro characteristic not only in the nervous system but also in the circulatory system. By increasing and improving their function, this will lead to activate the vital process in the body to reach the point of normalization.<sup>25</sup> Since emotion is an energy, then the energy also is twisted toward the normalization state.

In addition, the neutro force in the Triorigin theory is one of four forces that has a task to maintain health. Neutro is also a force that 'has characteristic and properties such as connection, harmonization, spontaneity, co-ordination, neutralization, equalization, equity, systematization, ordering, continuation, effectiveness, rhythm, improvement, adaptability, reconciliation, and morality'.<sup>25</sup> Thus, regular activity to generate a stable spiral structure through twist motions, can protect a person from disease, and contribute to maintaining a healthy constitution.<sup>25</sup>

In this study, the following therapy with seeds also helped to reduce fear because the seed has a latent power that is ready to be used for treatment.<sup>26</sup> The evidence can be seen when the seed gives life to plants. The seed is the plant's source of life and the power inside it can be used to improve the health of other living beings. This method has been introduced since 1988, however, the academic publication regarding the use of this method is very rare. This treatment is effective because there is a transfer of energy from the seed to the target area of therapy, as it is stated that the seed is very adaptable and can send energy of its life force or absorb the energy from the area suffering the health problem.<sup>26</sup>

This study, however, has some limitations. The researchers did not measure the level of pain more than 15 minutes, thus only the overall improvement trend can be seen in the results of the study. Further research with more duration of measurement of the level of fear can be conducted to be able to find out how many minutes are needed to reduce the fear level to the calmness state.

## CONCLUSION

The results show that Su Jok therapy provides a significant result in reducing the level of fear toward COVID-19 among patients with COVID-19.

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## Annexure - 1

### Fear Scale Measurement (FSM)

Range of score from 0 to 10

1. My fear related to: ..... (0 = No fear; 10 = The most fear)
2. My comfort related to: .....(0 = Feeling comfort; 10 = The most discomfort feeling)
3. When I think about: ..... my hands are (0 = Not wet at all; 10 = The most wet)
4. My feeling of lost of life because of: ..... (0 = No fear; 10 = The most fear)
5. When I hear news or story about: ..... I become anxiousness (worry) (0 = No anxiousness feeling; 10 = (The most anxiousness feeling)
6. My sleep pattern when I am worry that I have infected/experience the disease of ..... (0 = No sleep problem; 10 = The most severe sleep problem)
7. My heart beat when I am thinking of .....(0 = Feeling of normal heart beat; 10 = Feeling of the fastest heart beat)

Note: The blank space ('.....') is the object of fear, in this study was COVID-19