

## Development and Validation of a Turkish Hypnotic Suggestibility Scale

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### Abstract

**Objective:** To construct a scale for testing hypnotic suggestibility for Turkish-speaking adults that may be quick and convenient, and to test its reliability and validity.

**Methods:** The study was conducted at the hypnotherapy outpatient clinics of Atatürk University Acupuncture and Complementary Medicine Application and Research Centre, Erzurum, Turkey, from June to August 2017, and comprised aged 18-60 years. As the first step in the preparation of the scale, a panel of 15 experts was founded. The draft was pilot-tested. Incomprehensible suggestion templates in the pilot study were abolished, and the templates were reduced to four which were put to test as the Tastan Suggestibility Scale. Stanford Hypnotic Clinic Scale was also used on the same subjects, and the results were analysed using SPSS.

**Results:** Of the 61 subjects, 38(62.3%) were females and 23(37.7%) were males. The overall mean age was 34.21±9.9 years. Cronbach alpha internal reliability coefficient of the scale was calculated to be 0.53. Correlation between the Tastan Suggestibility Scale and Stanford Hypnotic Clinic Scale total scores was high ( $p<0.001$ ). Mean duration of the application of the scale was 5.0±1.2 minutes.

**Conclusion:** Tastan Suggestibility Scale was found to be a new, reliable, and rapidly applicable scale.

**Keywords:** Hypnotherapy, Suggestibility, Psychometrics. (JPMA 69: 1325; 2019)

### Introduction

Hypnosis is a state of human consciousness involving focussed attention and reduced peripheral awareness and an enhanced capacity for response to suggestion. It is a mental state while the subjects are having full control of their mind, done approvingly without any condition of unawareness.<sup>1</sup> Hypnosis has been known for centuries and is one of the spreading complementary and alternative treatment methods used to aid some disease conditions.<sup>2-4</sup> Hypnosis can be used in the treatment of hyperemesis gravidarum, pain control, obesity, depression, anxiety disorders, eating disorders, smoking cessation, and sleep disorders.<sup>5-11</sup> When the psychological disorders began to be treated by therapeutic trance, professionals needed to ascertain whether their patients were suitable for hypnosis or not. The Stanford Hypnotic Clinic Scale (SHCS) was introduced in 1959 as a suggestibility scale that measures the proclivity for hypnosis. The suggestibility of patients can be measured by this scale, and therapeutic hypnosis can be used more efficiently.<sup>12</sup>

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The original SHCC had two different forms named A and B, and both included 12 items. Application of these scales took one hour. Because of the application duration, utilisation of these scales decreased. Later, the same researchers prepared a new scale and named it the Stanford Hypnotic Clinic Scale Form C (SHCS-C).<sup>13</sup> But it was still difficult to apply the form, and the time required for the application could not be shortened.

These difficulties forced researchers to look for new methods of testing suggestibility. H. Spiegel<sup>14</sup> was the first researcher who developed an alternative, calling it the Hypnotic Induction Profile (HIP). Some scales such as the Barber Suggestibility Scale (BSS),<sup>15</sup> the Ghildren's Hypnotic Susceptibility Scale (GHSS),<sup>16</sup> SHCS for Adults, SHCS for Children,<sup>17</sup> the Alman-Wexler Indirect Hypnotic Susceptibility Scale,<sup>18</sup> and the Waterloo-Stanford Group C Scale<sup>19</sup> were developed later.

Utilization of suggestibility scales increases the overall effectiveness of hypnotic treatment.<sup>20</sup> The current study was planned to develop Tastan Suggestibility Scale (TSS), a new scale for Turkish-speaking adults, that may be quick and convenient, and to test its reliability and validity.

## Subjects and Methods

The study was conducted at the hypnotherapy outpatient clinics of Atatürk University Acupuncture and Complementary Medicine Application and Research Centre, Erzurum, Turkey, from June to August 2017, and comprised consecutive patients aged 18-60 years who signed informed consent to participate. Patients with mental retardation, having any psychotic disorder, hearing loss, or being illiterate were excluded and were those who refused participation.

The study was completed in 3 steps. First, a panel of 15 experts took part in the development of TSS. Communication was maintained through telephone contacts or e-mails. Items suggested by the experts with explanations were collected. There were 41

recommended items which were revised in concordance with literature<sup>10,12,14-21</sup> and items similar in nature were combined. Seeking advice from the experts in the second phase, time-consuming items and items challenging to apply were excluded.

In the final phase, TSS was refined to include 11 elements. The scale was pilot-tested on 38 consecutive patients aged 18-60 in the same clinic. Items that were found to be difficult to comprehend for the subjects were removed, leaving the final scale with four elements. TSS scale consists of 4 items (Appendix 1): swaying body, eyelids catalepsy, symptom formation, and hand rising. The scale starts with an explanation after which suggestions in the scale are applied, and according to the reactions observed, 0, 1, or 2 points are given to each

### Appendix-1: Items and Scoring guide of the Tasthan Suggestibility Scale (Translated from Turkish)

#### Explanations

"Shortly I will give you some suggestions. Some of these suggestions may make you feel a different state of mind, and some of them may have no effect. People have differences regarding suggestibility levels. I want to learn whether you are suggestible or not and if you are, how much you are suggestible. Just after that, I can determine which type of hypnosis is more suitable for you."

#### 1) Swaying body

The subject stands right in front of you. His heels and big toes should be adjacent to each other. First, he/she is told to look at a spot on the ceiling and then is asked to close eyes without changing the head position. At this point, the hypnotizer passes to the back of the subject, indicating that he/she shall feel safe in case of losing balance. "At this moment a strong wind is blowing from the front, and I want you to feel it pushing you backward (10 second of silence). The speed of the wind is increasing steadily, and your balance is deteriorating (15 seconds of silence). The wind is so intense that you have trouble standing upright (15 seconds of silence). You can't stand anymore; the wind has increased its strength so much, it has increased so much that your whole body is falling back (10 seconds of silence)".

#### Scoring Criteria:

No movement of the subject: 0 points  
Slight forward or backward movement: 1 point  
Falling forwards or backward: 2 points

#### 2) Eyelids catalepsy

"I want you to give all your attention and concentration to the eyelids while keeping your eyes closed. Just think of your eyelids. Very nice; and now feel like weighing a kilo on both eyelids (15 seconds silence). And the eyelids are getting heavier, more and more (15 seconds silence). As the eyelids become heavier and heavier, the eyelids will soon become so heavy that you will not be able to open the eyelids (10 seconds silence). At this moment, you can't open the eyelids although you want open them, and try to open the eyelids but do not open them (10 seconds silence)".

#### Scoring Criteria:

Opens eyes: 0 points  
Opens eyes after 5 seconds at the end of the suggestion: 1 point  
Can't open eyes for 10 seconds after the suggestion: 2 points  
Note: If the subject can't open the eyelids, a suggestion is given at the end of the application to lighten and open the eyelids.

"Now I will lighten the eyelids so you can open your eyes. Yes, they start to get lighter, they get lighter; now they are completely lightened and normalized. You can open them now; yes open your eyes."

#### 3) Symptom formation

"There is a mosquito on the tip of your nose, and it itches your nose with his movements; I want you to sense this feeling. The feeling of itching continues to increase; feel it (silence for 15 seconds). As the tip of your nose keeps itching more and more, you want to scratch the tip of the nose with your hand (15 seconds silence). It's so itchy now; it's itchy, you can't stand it anymore (10 seconds silence). Itching is always in the same place, and it bothers you; you want to scratch it and relax (10 seconds silence).

#### Scoring Criteria:

No symptoms of itching: 0 points  
Symptoms of itching expressed with face, eye, eyebrow and/or mimics: 1 point  
Scratching the nose: 2 points

#### 4) Hand rising

"I want you to put your right hand flat on the side of the seat you are sitting in (If necessary, the hypnotist puts his hand on the side of the seat). All your concentration is in your right hand, and I am tying flying balloons with three different colors to your right-hand (Hypnotizer touches three different places on the right-hand wrist). See those balloons and tell me their colors (wait 20 seconds). Now those flying balloons are slowly raising your hand up; feel it (wait 10 seconds). As your hand climbs up and up, it feels like a bird feather (wait 10 seconds). Very nice; the hand is increasingly lighter, lighter, and lighter; almost as light as cotton, and continues to rise (wait 10 seconds).

#### Scoring Criteria:

Can't say the colour of the balloons and the hand does not rise: 0 points  
Tells the colours of the balloons but no hand rising: 1 point  
Mentions the colours of the balloons, and the hand rises: 2 points

**Appendix-2:** Tastan Suggestibility Scale (TSS) Scoring Guide

Name, Surname: \_\_\_\_\_

Date : \_\_\_\_\_

Item scoring summary

1. Swaying body:

2. Eyelids catalepsy:

3. Symptom formation:

4. Hand rising:

Total Score:

TSS evaluation

The maximum possible score of the TSS is 8.

0-2 points = Low hypnotizability

3-5 points = Medium hypnotizability

6-8 points = High hypnotizability

**Table-1:** Questions about scale quality asked during the face validity.**Face validity questions**

What are your general views about explanations on the scale?

What are your general views about suggestions on the scale?

What are your general views about the scale?

Is the language used in the scale suitable?

Is there any incoherent suggestion?

Do you have any opinion about scale?

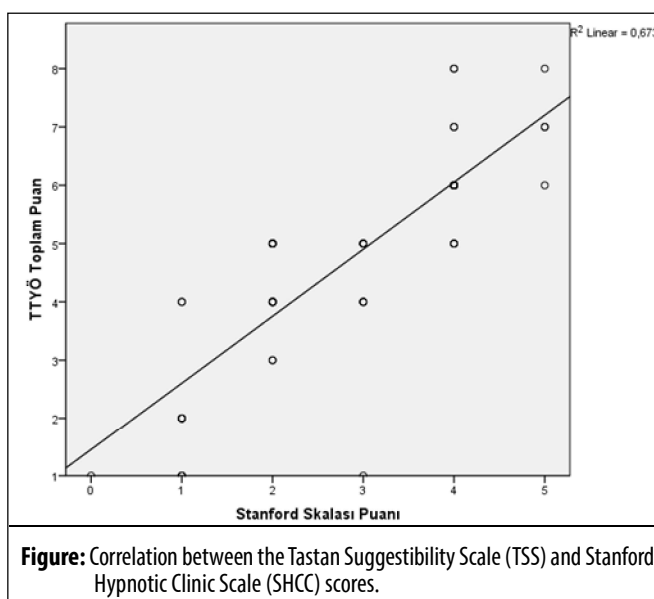
**Table-2:** Rotated Component Matrix.

	1	2
Eyelids catalepsy	0.063	0.778
Symptom formation	0.880	0.092
Swaying body	0.883	0.098
Hand rising	0.102	0.757

item. Scoring is done according to the TSS scorecard which means that the maximum total TSS score is eight (Appendix 2).

According to the SHCC guide, a subject who passes 4-5 items is highly hypnotisable, 2-3 average degree of hypnotisability, and 0-1 lowly hypnotisable.<sup>20</sup> TSS categorised 0-2 points = low suggestibility, 3-5 points = medium suggestibility, and 6-8 points = high suggestibility.

Face validity of the instrument was done during the pilot study that had 38 university students, academicians and family practice residents as volunteers. Their opinions were taken qualitatively by requesting them to answer certain questions (Table 1). Participants defined their view related to TSS Explanation part as "simple, comprehensible." They expressed their view related to TSS Suggestion part, and their general view was that TSS was "simple, practical and applicable". Any item recommended to be rephrased was reorganised

**Figure:** Correlation between the Tastan Suggestibility Scale (TSS) and Stanford Hypnotic Clinic Scale (SHCC) scores.

accordingly. Participants considered TSS language "comprehensible, plain and simple". Participants did not indicate any incoherent suggestion. According to the participants' opinions, spelling errors and inverted sentences were corrected.

Factor analysis was done after the application of the final scale to the larger sample. Principal component extraction using varimax rotation was done which revealed two components with high factor loadings (Table 2). Symptom formation and Swaying body were grouped under Factor 1, while Eyelids catalepsy and Hand raising were under Factor 2.

The Turkish version of the Stanford suggestibility scale<sup>20</sup> was applied to the same number of subjects. Concurrent validity with the SHCC was checked using Pearson correlation analysis. There was a strong significant correlation between TSS and SHCC scores ( $p < 0.001$  (Figure).

Cronbach alpha internal reliability coefficient was calculated to be 0.536.

**Results**

Of the 70 individuals approached, 61(87.14%) responded. Among them, 38(62.3%) were females and 23(37.7%) were males. Overall mean age was  $34.21 \pm 9.9$  years. In terms of education, 4(6.6%) were graduates of primary school, 29(47.5%) high school, and 28(45.9%) university. The overall mean TSS score was  $4.64 \pm 1.76$  (Table 3). Compared with women, the mean TSS score was

**Table-3:** Descriptive statistics of the scale items.

	Mean±SD
Eyelids catalepsy	1.13±0.67
Symptom formation	1.08±0.71
Swaying body	1.20±0.65
Hand rising	1.20±0.70
Total scale score	4.64±1.76

significantly higher for men ( $5.22\pm 1.59$  vs.  $4.29\pm 1.78$ ;  $t=2.047$ ;  $p=0.045$ ) (Table 3).

Using the SHCC as the gold-standard, the TSS showed high sensitivity and specificity values in categorising the participants as low, medium or high hypnotisable (Table 4).

Application of TSS was easy and the mean time for completing the induction step was  $5.0\pm 1.2$  minutes.

## Discussion

Findings suggested that TSS is a valid, reliable and consistent scale to evaluate hypnotic suggestibility of Turkish-speaking adults.

Hypnosis, including susceptibility to suggestion, compliance with instructions, and adherence to directives, has steadily harnessed scientific attention over the past century.<sup>22</sup> Although hypnosis has been used for centuries, it has only been relatively recent that research has provided empirical evidence showing how hypnosis can help in gaining control over deeply-ingrained psychological processes.<sup>23</sup>

Internal reliability of the TSS was calculated as 0.53. The Cronbach alpha internal reliability coefficient of the SHCC has been estimated as 0.66.<sup>20</sup> However, given that TSS has only four items, the obtained value is satisfactory. The reliability of the suggestibility scales is one of the essential points for hypnotists. Evaluation of the applicant for suggestibility is significant both from the perspective of applying safe hypnosis as well as choosing the correct induction method. To determine the correlation between being a good candidate for hypnosis and psychopathology

will be useful for providing right, powerful and professional use of hypnosis. It also results in reducing malpractices and wastage of time and money.<sup>20</sup>

Although several scales for assessing hypnotisability exist<sup>24,25</sup> most researchers rely on the SHCS-C.<sup>13</sup> However, the developers themselves<sup>26</sup> expressed concerns regarding the confusion between suggestions and instructions, as well as the clinical impracticality (50-90 minutes) of the SHCS-C.

Correlation of the TSS scores with the SHCS demonstrated a high consistency of the scale. Additionally, the high sensitivity and specificity values suggested that the TSS is comparable with the SHCS.

The application time for TSS was only 5 minutes. This is relatively short compared to the 50-90 minutes needed to apply SHCS.<sup>20</sup> One of the most important things for hypnotherapists is the efficient use of time. The shorter time required for practice during TSS is more advantageous for hypnotherapists. Another critical rationale for developing a scale for the Turkish population was the interference of cultural factors. Particular cultural activities may induce specific altered states of consciousness, such as the use of psychoactive plants, fasting, thirsting, self-mutilation, sweat lodges, sleeplessness, incessant dancing, bleeding, walking on hot coals, meditation, chanting, or drumming.<sup>27</sup> Suitability of comparative measurements follows by grounding transcultural studies in the local context.<sup>28</sup>

Items of the TSS were developed with the input of experienced hypnotists from Turkey who had long years of contact with the members of the community. Since TSS can be performed quickly and easily, it is also more useful in terms of patient compliance. We recommend health professionals who are competent for hypnotherapy to use the TSS in daily practice.

## Conclusion

The relatively short time of application, ease of use and scoring, as well as a strong correlation with the SHCS

**Table-4:** Sensitivity and specificity of the Tapan Suggestibility Scale (TSS) in categorising suggestibility of the participants.

TSS Grouping	SHCC Grouping	SHCC Grouping				Performance of TSS Compared to SHCC	
		Low	Medium	High	Total	Sensitivity	Specificity
TSS Grouping	Low	8	1	0	9	88.9	98.1
	Medium	2	28	3	33	84.8	87.5
	High	0	0	19	19	100.0	92.9
	Total	10	29	22	61		

SHCC: Stanford Hypnotic Clinic Scale.

makes TSS a good alternative for evaluating suggestibility in office conditions. TSS has essential validity and reliability for practices and academic studies.

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**Conflict of Interest:** None.

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## References

1. Tastan K, Set T. [Hypnotherapy: The Therapeutic Power of the Subconscious]. *Erzurum: Ayhan Ofset Matbaacilik*; 2014, 37-45 .
2. Rankin-Box D. Hypnosis. *Complement Ther Nurs Midwifery* 1996; 2: 148-50.
3. Set T, Tastan K. [Hypnosis and its use in family practice]. *Turkiye Klin J Fam Med Special Top* 2012; 3: 56-8.
4. Tastan K, Cayir Y, Makas YN, Set T, Hulaku A, Teksan T. [Related Opinions, Education Level and Information Resources of the Doctors Working in Atatürk University Faculty of Medicine]. *Smyrna Med J* 2015; 5: 12-7.
5. Túry F, Wildmann M, Szentes A. Tandem Hypnosis with Identical Bulimic Twins: Case Report. *Am J Clin Hypn* 2011; 53: 265-75.
6. Wester WC, Hammond DC. Solving Crimes with Hypnosis. *Am J Clin Hypn* 2011; 53: 249-63.
7. McCormack D. Hypnosis for hyperemesis gravidarum. *J Obstet Gynaecol* 2010; 30: 647-53.
8. Restif AS. [Self-hypnosis, a resource for children undergoing painful treatment]. *Soins Pediatr Pueric* 2010; (254): 37-9.
9. Smaga D, Cheseaux N, Forster A, Colombo S, Rentsch D, de Tonnac N. [Hypnosis and anxiety problems]. *Rev Med Suisse* 2010; 6: 330-3.
10. Jensen MP. Hypnosis for chronic pain management: A new hope. *Pain* 2009; 146: 235-7.
11. Sharma SK, Kaur J. Hypnosis and pain management. *Nurs J India* 2006; 97: 129-31.
12. Weitzenhoffer AM, Hilgard ER. *Stanford Hypnotic Susceptibility Scale, forms A and B*. Palo Alto, California: Consulting Psychologists Press; 1959.
13. Weitzenhoffer AM, Hilgard ER. *Stanford hypnotic susceptibility scale: Form C*. Palo Alto, California: Consulting Psychologists Press; 1962.
14. Spiegel H, Aronson M, Fleiss JL, Haber J. Psychometric analysis of the hypnotic induction profile. *Int J Clin Exp Hypn* 1976; 24: 300-15.
15. Barber TX. Measuring "Hypnotic-Like" Suggestibility with and without "Hypnotic Induction"; Psychometric Properties, Norms, and Variables Influencing Response to the Barber Suggestibility Scale (BSS). *Psychol Rep* 1965; 16: 809-44.
16. Cooper LM, London P. The Children's Hypnotic Susceptibility Scale. *Am J Clin Hypn* 1978; 21:170-85.
17. Morgan AH, Hilgard JR. The Stanford Hypnotic Clinical Scale for Children. *Am J Clin Hypn* 1978; 21: 148-69.
18. Alman BM, Wexler D. Alman-Wexler Indirect Hypnotic Susceptibility Scale (AWIHSS). In: Pratt CJ, Wood DP, Alman BM, editors. *Clinical hypnosis primer Expanded and updated*. New York: John Wiley; 1988, pp. 379-88.
19. Bowers KS. The waterloo-stanford group c (wsgc) scale of hypnotic susceptibility: Normative and comparative data 1. *Int J Clin Exp Hypn* 1993; 41: 35-46.
20. Agargun MY, Gulec M, Ozturk R, Cimen D. The Stanford hypnotic clinical scale for adults (SHCS): Validity and reliability of the Turkish version. *Sleep Hypn* 2007; 9: 71-81.
21. Spiegel H. An Eye-Roll Test for Hypnotizability. *Am J Clin Hypn* 2010; 53: 15-8.
22. Halligan PW, Oakley DA. Hypnosis and beyond: Exploring the broader domain of suggestion. *Psychol Conscious Theory Res Pract* 2014;1: 105-22.
23. Raz A. Hypnosis: a twilight zone of the top-down variety. *Trends Cogn Sci* 2011; 15: 555-7.
24. Kirsch I, Council JR, Wickless C. Subjective scoring for the Harvard Group Scale of Hypnotic Susceptibility, Form A. *Int J Clin Exp Hypn* 1990; 38: 112-24.
25. Field PB. An inventory scale of hypnotic depth. *Int J Clin Exp Hypn* 1965; 13: 238-49.
26. Weitzenhoffer AM, Hilgard ER, Kihlstrom JF. *Stanford hypnotic susceptibility scale, form C*. *Philos Psychol* 1996; 16: 325-40.
27. Furst PT. 'High states' in culture-historical perspective. In: Zinberg N, editor. *Alternate states of consciousness*. New York, NY: Free Press; 1977, pp. 53-88.
28. Champigny CM, Raz A. Transcultural Factors in Hypnotizability Scales: Limits and Prospects. *Am J Clin Hypn* 2015; 58: 171-94.