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The relationship between ABO blood groups and hypnotic susceptibility

Sepideh Iranfar
Department of Speech Therapy, Student's Research Committee
Tabriz University of Medical Sciences, Tabriz, Iran

Eric Letard
Department of Psychology
University of Nantes, Nantes, France

Correlational research has been undertaken to explain the purpose of the association between ABO blood groups and hypnotic susceptibility. The Stanford Hypnotic Susceptibility Form (Form C), modified by John F Kilhstrom, with a Cronbach's alpha coefficient of 0.95, was used to determine the associations between blood groups and susceptibility. In this study, a clustered random-sampling method was used to investigate the relationship between hypnotic susceptibility and blood-group type, using the Spearman Correlation Coefficient. The results indicate a statistically significant correlation, with a sample size of 40 (n=40), resulted in HS (Hypnotic Susceptibility) to be medium (x= 2.53), and a mean blood group of 2.40 (SDHS: 0.50; SDABO:1.33). The results and hypothesis are described, and support the suggestion of a strong association between blood groups and hypnosis.

Keywords: hypnotic susceptibility, ABO blood groups

All people are not all equally hypnotic, but recent studies indicate that different depths of hypnosis exist among people demonstrating different characteristics. When it comes to the assessment of hypnotic susceptibility in people, it is usually presented in terms of high, low and medium. Previous research investigating susceptibility have suggested that 10% of the population would otherwise be categorized as high, 10% would be regarded as having a low hypnotic susceptibility, while the majority of the population (80%) would fall within the medium category (Hilgard & Philip, 1958). Depth of hypnosis, as part of an individual's hypnotic susceptibility, has been found to be dependent on several factors besides clinician skill, such as intelligence and gender (Ruskiet, 2004). With regard to reported genetic factors having impact on the depth of hypnotic trance, previous research has identified that if mothers are found to be susceptible to hypnosis, their children will then have a greater propensity for hypnotic susceptibility (Davis, 1931). A recent survey conducted (Hilgard, 1996) using the test-retest method of analysis, indicated responses to hypnotic characteristics as being relatively consistent in finding this relation.

Several studies have indicated a relationship between blood groups and various factors including enuresis (Ghasemi, Elahi, Mesdagh, & Mahdavi, 2012), and behaviour, Helicobacter pylori (Mohamad Salih Jaff, 2011), Rh Blood Groups (Cohen & Glass, 1959), blood donors' sibs (Allan, 1969); in addition to these, it has been found that there are correlations between hypnotic susceptibility and sex differences (Hilgard & Philip, 1958; Miyoshi, Roshizumi, Sato, Okuitogawa, & Honma, 2005; Dewood, Spores, Notske, Mouse, Burroughs, & Goldemsetal, 1980; Mirzadegan, Salarfar, Sadighian, Davoodi, Goodarzynejad, & Darabian, 2006). With finding this relation, hypnotizer can word with men and women differently. And selecting method of hypnosis can be easy for doctors by know the difference between genders. The other difference relating to hypnotic susceptibility can be find according this relation.

Some relationships with hypnosis can be used as an effective method to care the disease. For example women having Urinary Tract Infection with B blood group can be cared by hypnosis.

Our aim is to investigate the impact blood groups have on an individual's level of susceptibility to hypnotic suggestion. This study aimed to identify the effective method of hypnosis for care to improve the level of clinical psychology and raising the Health level and speed of treatment. and investigates the relationship between A, B, AB and O blood groups with

Disease Helicobacter pylori (Mohamad Salih Jaff, 2011), as well as investigating the relationship between blood type and hypnotic susceptibility. The first hypothes having non-relation between ABO groups of blood and hypnotic susceptibility. Second hypotheses, having relation between ABO and hypnotic susceptibility, third one checking relation between O and hypnotic susceptibility.

Method

Participants

This study had a sample size of 40 students with 25% (n=10) graduates and 75% (n=30) undergraduates from the College of Abadan Oil, Iran. The sample comprised of 42.5% female (n=17) and 57.5% male (n=23), with a mean age of 22 years (a range of 20-24 years). The method of data collection used was of a clustered sampling.

Instrument and Procedure

A modified version of The Stanford Hypnotic Susceptibility Scale (Form C), (Stanford Hypnotic Susceptibility Scale, Form C, with the scoring booklet for modification by Kihlstrom (1996), original version from Stanford university, was used. The questionnaire was developed in 1962 by researchers Hilgard and Weitzenhoffer (1962), and modified by Kihlstrom (1996). The SHSS-C was reported to have had a Cronbach's alpha coefficient by test-retest of 0.95 (Kilstrom, 1996). Recording of the participants' names on the questionnaires were optional, as the level of hypnotic susceptibility was considered to be personal, and some participants did not want to be identified, nor did they wish to permit the researchers to identify the scores with the participants. The researchers used a coding process of de-identifying the participants, which consisted of numeric numbers, assigned to each participant at the beginning of

Correspondence should be sent to Sepideh Iranfar
Department of Speech Therapy, Student's Research Committee
Tabriz University of Medical Sciences, Tabriz, Iran
E-mail: siranfar1@gmail.com

the testing session. The participants were invited to know their scores by their assigned codes.

Participant blood groups were checked with an antigen agent to determine blood type. Participants were required to identify their blood type on the questionnaires to associate the two variables of blood type and susceptibility level. Missing data were kept.

To evaluate the correlation between hypnotic susceptibility and blood type, Spearman's Correlation was used at the 0.01 significance level. The collected data were analyzed using the software SPSS (version 18). Current research was assessed at the 0.01 significance level (C.I.=0.99) with a chi-square ($\chi 2$).

Results

In the cohort sampled (N=40) all four blood groups were represented: blood type A (n=16; 40%), blood type B (n=6; 15%), blood type AB (n=4; 10), and blood type O (n=14; 35%) however the frequency of ABO was difference, it was prepared the even conditions for all.

The following table (Table 1) shows the SHSS scores for all blood groups in this study.

Table 1: Hypnotic susceptibility difference in blood types.

Blood groups	Desire to obtain score	Susceptibility
A	8	Don't have
B	11	Have
O	9	Have
AB	8	Have

During this study, the participants in the blood group B achieved relatively high scores (>=11) on the SHSS and they had no problem whit hypnosis in other words they did not wake up and show unusual reactions.

Variables such as ABO blood groups and hypnotic susceptibility were correlated at 0.713, meaning that there was a high correlation between the two variables of ABO blood types and hypnotic susceptibility. Spearman's correlation at the 0.01 significance level, with 38 degrees of freedom was found to be 0.388, with a significant correlation, indicating a strong relationship exists between hypnotic susceptibility and ABO blood groups, as well as it was reported, the mount of accepting hypnosis entitled hypnotic susceptibility rely on groups of blood in addition to personality quality.

A Chi-square test between the scores of hypnotic susceptibility and ABO blood types was found to be ($\rho<0.01$) 29.559, ($\chi 2=11.34$). Following from these results, it can be stated that blood group B has a high flexibility for suggestibility on hypnotic scales, and in comparison to all blood group types, blood group B scored higher than the other blood types. According to these results, we can suggest that using hypnotherapy will likely provide a greater level of success in treatment outcomes that in the use of medications or chemical drugs for this blood type, and in blood group A we did not see anything showing suggestibility and blood group A had problem with hypnosis and had low flexibility, they often woke up during our work.

Discussion

There were 12 levels in the SHSS and all participants had equal ability to receive a score between 1 and 12. Each level was assigned to one of three groups called low hypnotic susceptibility with scores between 1 and 4, middle hypnotic susceptibility with scores between 4 and 8, and high hypnotic susceptibility with scores between 8 and 12. In our investigations, for example, participants who passed all the steps in the hypnotisability tasks, were able to receive a score of 12 in the SHSS, indicating that they had a high hypnotic susceptibility.

Blood type A had been found to have a scores in the moderate hypnotic susceptibility range, with willingness to get a score of 8 in their resistance to hypnosis, considered as being relatively high. In other words, they did not want to subscribe to hypnotism and wanted to remain consciously awake. As a result of this, the researchers faced challenges with getting the participants within this blood type group to cooperate during trance inductions, with disturbances including talking and laughing during testing, which had led to causing blocks to hypnosis. As the researchers had to spend more time on trance induction for participants in this blood group, some of the participants woke up during hypnosis, which was consequently attributed to these participants receiving a low HS score. The majority of the participants with blood type A could not obtain consistency at a high level (9 to 12), with the exception of two participants in this group, primarily having passed the preliminary levels in the SHSS.

Our results indicate that 93% of the participants in our study in the blood group O had passed 9 levels of the SHSS. This was of particular interest to us, to see most them obtaining the same or similar HS scores. This outcome suggests that their resistance to the hypnotic approach was very low and achieved trance without difficulty.

In this study, participants with blood type AB, had a desire to achieve hypnotic trance at a medium level as reported in the SHSS. In fact, they would like to hypnotism nor high and nor low, means they like to be in average, and they received a score of 8 in the SHSS, (8 out of a possible 12).

As demonstrated in our study, individuals with blood-group A were unlikely to be susceptible to hypnotic attempts, while those with AB blood types had some level of hypnotic susceptibility. A potential reason for the participants in the AB group to have received the same or similar scores on the SHSS was most likely due to the researchers having paid attention during the hypnotic process to the participants' resistance to hypnosis. In fact, when considering the two blood groups, A and AB, and correlating their questionnaires, in our investigations, we saw blood type A were not able to pass all levels successively, having many problems during hypnosis, to the point where the researchers were forced to suggest additional suggestions to them from time to time, including at levels 7, 9, and 11; while participants within the blood group AB did not have same problem& as blood group A, and were more easily hypnotised than blood type A.

In this study there were more participants in blood group A, having scores of 8 out of 12 (n=11), with a number of participants of this group achieving a score of 8 or less (n=2). This result indicates that the maximum score for this blood group (A) was 8; while participants in the AB blood group achieved a score of 8 or more (n=6). The differences between the two blood groups indicate that individuals with blood type AB are susceptible to hypnotic trance inductions more so than individuals with a blood type of A, and no information is mentioned on the relation of the blood groups and hypnotic susceptibility.

From the results of this study, participants with blood type of B had higher scores than any other blood group, and did not demonstrate resistance to hypnosis or trance induction, according to this research we find out the personal factors related to the clinical psychology as well as the work of hypnotizers can be easier after publishing result because they can understand how is susceptible for hypnosis or not just by knowing blood groups, and blood groups can help them to choose the best method to hypnotism patience.

Limitations of the study

There were a number of limitations in this study that are required to be considered for future research, and in the generalizability of the results presented. Low sample size of this study was a limitation for this study because in Iran people didn't have such a high opinion about hypnosis. Due to the low sample size, we consider these results to have generalizability issues.

In this study, the researchers did not explore gender differences and how gender affects hypnotisability, further limiting this study's generalizability. There is potential for future research to focus on gender differences within blood types and investigate the relationship between blood type, gender and hypnotic susceptibility.

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