

## Medidas diversas da assertividade em adultos

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O presente estudo objetivou avaliar a correlação entre vários componentes da assertividade avaliada através de diferentes medidas e verificar a fidedignidade das mesmas através do tempo. Três medidas de assertividade foram utilizadas com 58 adultos que participaram de um estudo de reatividade cardiovascular. As medidas foram: Escala de Assertividade de Rathus, avaliação de juizes observadores e um teste comportamental de "role play" o qual incluiu uma avaliação do conteúdo verbal das interações nas cenas e avaliação de comportamentos não-verbais. Vinte e quatro situações de "role play" que envolviam *stress* social foram utilizadas em três ocasiões distintas, com três semanas de intervalo cada. Algumas cenas incluíam expressões de sentimentos positivos e outras exigiam que a pessoa expressasse sentimentos negativos. As respostas dos participantes foram filmadas em vídeo e avaliadas posteriormente. Os resultados indicaram que as medidas não variaram de sessão para sessão. As notas na Escala de Rathus se correlacionaram com medidas de contato visual e de latência de fala durante as cenas positivas. As observações dos juizes se correlacionaram positivamente com o conteúdo verbal das interações. Uma correlação negativa foi encontrada entre idade e grau de assertividade indicando um possível efeito de idade na expressão da assertividade. Os dados confirmaram os de Eiler et al. (1975), Hersen et al. (1978) e McCartan et al. (1990) quanto a determinantes situacionais da assertividade e indicam a necessidade de se avaliar especificamente o papel da idade na expressão da assertividade.

**Palavras-chave:** assertividade, idade, medidas de assertividade.

### Abstract

#### Different Measures of Assertiveness in Adults

This study had for objective to investigate the correlation between several components of assertiveness as assessed by different measures and to verify how reliable they are over time. Three assertion measures were used with 58 adult subjects, who were participants in a blood pressure reactivity study. The measures were: the Rathus Assertiveness Schedule (RAS), observers' ratings and a role play behavioral test, which included an evaluation of the verbal content of the role played interactions and the rating of nonverbal behaviors. Twenty four role-played situations involving social challenges were administered on three occasions three weeks apart. Some of the scenes included expression of positive affect and the others required negative assertion. Responses to these situation were video-taped and scored later. Results indicated that the measurements did not change significantly over time, the RAS correlated with eye contact and speech latency during the positive scenes. The observers' rating and the verbal content of the interactions scores were positively correlated. A negative correlation was found both between age and the observers' rating and the verbal content of the interactions score indicating a possible age effect on assertion. The data confirms Eiler et al. (1975), Hersen et al (1978) and McCartan et al. (1990) findings on the situational determinants of assertiveness and points to the need of further assessing the role of age in the area of assertion.

**Key words:** Assertiveness, age, assertion measures

### Assertiveness in adults: a comparison of measures

Assertiveness, defined by Wolpe (1969) as the ability to express both negative and positive feelings, to act upon the environment to defend one's rights without being aggressive and without the fear of losing other people's love, has been a major issue in connection to many psychological and psychiatric

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phenomena, such as depression, anxiety and phobias (Seligman, 1973; Ziegler & Levine, 1973). It also has been linked to some physical diagnoses, specially essential hypertension (Kalis, Harris, Sokolow & Carpenter, 1957).

Several studies have emphasized the multifactorial nature of assertiveness and have attempted to conduct task analyses of assertive behavior (Schwartz & Gottman, 1976; Arrindell et al, 1988; McCartan & Hargie, 1990). McCartan & Hargie (1990) compared four different assertive measure-

ments in the assessment of student-nurse behavior. Their results indicated no correlation among the measures, except between the Rathus Assertiveness Schedule and the Semantic Differential Measurement. Additionally, Kern & Karten (1991) showed the fakability of two different methodologies to assess assertion. The need for a conceptual clarification of what constitutes assertiveness and how the different ways of measuring it correlate among themselves has become a central issue in the field. Rathus (1975) suggests that there are ten types of assertive behaviors, which range from forceful, goal-oriented responses to the expression of positive and negative effect and to rewarding others for compliments. In addition to the verbal aspects, it is clear that assertiveness also involves non verbal components, but so far there are no objective criteria on which to identify low assertiveness. Bornstein, Bellack and Hersen (1977) found that their unassertive subjects had deficits in three areas: eye contact, loudness of speech and requests for new behavior. Morrison, Bellack & Manuck (1985) utilized as criteria for assertiveness not only the content of the subjects' verbalization, but also the rate of eye contact to speech duration, response latency, speech disturbance. Hersen, Bellack & Turner (1978) used all of these components plus appropriate intonation, appropriate smiling and physical gestures to determine assertiveness level.

The present study, which was part of a larger research project on blood pressure reactivity to be reported elsewhere, investigated the correlations between several components of assertiveness assessed by the following measures: the Rathus Assertiveness Schedule, observer rating given by two judges during behavioral role play sessions, video-taped behaviors, and the verbal content of the interactions during role play.

An additional objective was to verify how reliable assertiveness measures were over three different role play sessions, spaced two weeks apart.

## Method

### Subjects

Fifty eight adults were recruited from the surrounding hospital community. The sample included 19 white and 14 black females, 16 white and nine black males, ranging in age from 21-70

years (mean  $\pm$  S.E. = 40.8  $\pm$  1.4 years). Male subjects (44.2  $\pm$  2.6 years) were older than females (38.2  $\pm$  1.2 years);  $t = 2.18$ ;  $p = .03$ . No significant differences were observed in age between white (42.7  $\pm$  2.02) and black subjects (40.09  $\pm$  2.38);  $t = 0.8$ ; N.S.

### Measures

Three different methods were used to assess the assertiveness level of the subjects, namely: (a) the Rathus Assertiveness Schedule, (b) assertiveness rating given by two observers (observers' rating), (c) behavioral test in the form of a role play session, which included verbal and non verbal measures.

a) Rathus Assertiveness Schedule (RAS): This schedule, developed by Rathus (1973), is comprised by a 30-item self-report inventory designed to assess level of assertiveness. The test-retest reliability of the RAS has been established as .78.

b) Observers' assertiveness rating: Two observers rated assertiveness during the role play session using a 5-point scale ranging from 1 (very unassertive) to 5 (very assertive). The observers were trained to a criterion of 80% agreement. The training was done by first discussing the concept of assertiveness proposed by Wolpe (1969) and Rathus (1973, 1975) until it was felt that the observers understood it and agreed on what components to look for. Secondly, the observers were requested to watch several tapes and rate them independently. Whenever there was a disagreement on a measure, the tape was watched again and the reason for the discordance was discussed until the concept became clearer for the two judges and an agreement was achieved. Reliability checks were obtained on all subjects.

c) Behavioral Test: The role played situations described below were video-taped and rated retrospectively by two raters who were trained to a criterion of 80% agreement in 5 types of behavioral measures used:

- (1) eye contact
- (2) speech duration
- (3) speech latency
- (4) intonation of the speech and
- (5) verbal content of the interactions.

### Role played assertive situations

Twenty four role played situations involving social interactions were compiled and divided into three sets of 8 scenes. Each set contained two practice scenes, two positive assertion vignettes, and four negative assertion scenarios. Each set of scenes gave

rise to two audio tapes, one in which the positive scenes appeared first, and the other one in which they were placed after the negative scenes. The sets were judged by three judges as being equivalent in the amount of assertiveness the responses to them would require. The two neutral scenes were included as practice trials and contained non controversial material such as ordering a meal, taking some clothes to be cleaned or buying desert. The other scenes were all based on Rathus' (1975) suggestion of different types of assertive behaviors. Each scene involved four interactions with the confederate. Tapes were assigned to the sessions in a block randomized fashion, so that the number of subjects listening to the positive scenes first was equal to the ones who listened to the negative first. The description of the scenarios lasted approximately 1 minute.

#### Negative assertion scenes

These situations were devised to evoke: (a) forceful, goal-oriented responses, (b) expression of negative feelings, (c) disagreement, (d) discontinuation of disagreeable interactions.

#### Positive assertion scenes

These scenes required the subjects to: (a) express positive affect and (b) reward others for compliment.

Some samples of the scenes used are:

#### Negative assertion requiring forceful, goal-oriented response:

Yesterday you bought an expensive CD player. When you opened the box, you could not find the manual. No matter how much you tried it was not possible to get it to work. You pressed all possible buttons, you even tried to press all buttons at once. You felt very frustrated especially because you had invited a friend to see your new CD player. This friend had brought over his own cds for you to listen to and laughed at you for buying expensive equipment that you could not operate. You really felt frustrated and angry and kept thinking that if you only had the manual you would be able to find out what to do.

Today, first thing in the morning, you go to the store. You feel very annoyed because the store is quite far from your house. Make believe that you are

at the store. Approach the salesman and do what you usually would do in real life.

**Confederate:** Good morning.

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**Subject's response**

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**Confederate:** (salesman in a patronizing way): Well, you must be doing something wrong. It is very easy to operate this machine.

**You don't need a manual for that.**

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**Subject's response**

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**Confederate:** Show me what you are doing, and I will tell you what you are doing wrong.

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**Subject's response**

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**Confederate:** The problem is that people don't know how to operate electronics and blame the equipment.

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**Subject's response**

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#### Positive assertion scenario requiring acceptance of compliment:

You have worked very hard for a couple of weeks finishing up a job. It was a complex task that took a lot of effort and dedication. You are very pleased with the results. One of your co-workers looks it over and is impressed. He says:

**Confederate:** What a beautiful piece of work!

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**Subject's response**

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**Confederate:** It must have taken you a lot of work to turn this out.

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**Subject's response**

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**Confederate:** As I always say, if you are going to do a job, do it the best you can.

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**Subject's response**

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**Confederate:** Congratulations! The boss is going to love it.

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**Subject's response**

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### Procedures

Each subject was brought into the laboratory by a white female technician who had made the appointments by phone. After questions had been answered and the consent form was signed the technician left the room and a white, female investigator (MNL) entered it, asked a series of questions regarding demographics, the psychological and the physical health history of the subject and administered, verbally, the Rathus Assertiveness Schedule. At that moment, she answered any questions the subject might have had and explained briefly the procedure for the role play session to follow. Specifically, subjects were told "We are conducting a study to see how different people react in some every day situations. I am going to leave the room and I will be back in a little while with an assistant. Then you will hear tape recorded descriptions of some situations one at a time, and you will be asked to interact with my assistant as if you were really in the situation described. Please behave just the way you would do in real life. There is no right or wrong way, but try to express yourself as fully as possible. Do you have any questions?." At this point the investigator left the room for 10 minutes and re-entered it accompanied by a 26 year old, black, male confederate. The video cassette camera was turned on and the tape recorder was started. Half of the subjects listened to tapes where the scenes with positive content appeared first, while the other half had the negative content scenes last. For the subjects that participated in the three role play sessions, the order of the presentation was maintained, although the scenes were different. The role play session lasted from 10 to 20 minutes.

### Data analyses

The performance of the subjects, during positive and negative scenes, was compared by paired two-tailed t-tests. Pearson-moment coefficients of correlation were also calculated to compare the results on the different measures of assertiveness utilized.

The consistency of the assertiveness performance over three behavioral role play tests, conducted two weeks apart, was evaluated by repeated-measures analyses of variance for 18 of the subjects.

#### Scoring of Behavioral Measures

- a) Eye contact was recorded as the total amount of time that the subject looked into the confederate eyes while responding to all prompts.
- b) Speech duration was measured as the total amount of time the participant spent speaking to the confederate during all scenes. Pauses longer than 3 seconds were excluded.
- c) Entonation was rated on a five-point scale (1 = a very flat, unemotional intonation, 5 = a full lively tone of voice).
- d) speech latency was defined as the amount of time that elapsed from the time each prompt was delivered until the subject started speaking.
- e) The verbal content of the interactions score was based on the occurrence of opposition and requests for new behaviors in negative scenes and the occurrence of praise, appreciation or approval in the positive scenes. This score was calculated as follows: Each of the negative and positive scenes could potentially be scored as 1 or 0 (1 = the subject behaved in an assertive fashion during that particular scene, and 0 = the subject's behavior was not assertive in that scene). To be rated one, analyses of the video tape session should reveal that the subject's response contained two or more requests and no compliance during the negative scenes. For the positive scenes, the criterion to be rated one was to contain at least two praises, appreciation or approval. In this fashion, the highest score for assertiveness was 6. For the purpose of data analyses, it was established that scores of 5-6 would be given a total verbal content of the interactions score of 4 (very assertive), scores 3-4 would receive an assessment of 3 (average in assertiveness) and scores below 3 would be represented by 2 (very unassertive).
- f) The observers' rating of assertiveness was calculated by averaging the assertiveness ratings given by the two observers immediately after the role play session. They used a 5-point scale ranging from 1 (very unassertive) to 5 (very assertive).

#### *Reliability of behavioral measures*

One observer rated all tapes for the subjects, while another rated 25% of the tapes chosen randomly. Pearson product-moment correlations were computed between the rating given by the two observers.

Inter-raters reliabilities were: eye contact,  $r = .90$ ; speech duration,  $r = .97$ ; speech latency  $r = .86$ ; intonation,  $r = .85$  and verbal,  $r = .90$ . The high reliability scores approximate those found by Hersen et al. (1978) and could be attributed to using the videotaped recordings retrospectively to rate one behavior at a time and to the specificity of the criteria used.

The inter-raters reliability for the evaluation done by the two observers' immediately after the role play was  $r = .89$ .

#### *Effects of the type of the scene*

Paired two tailed t-tests were used to assess the differences in performance during the role play of positive and negative scenarios in speech latency, speech duration, eye contact and voice intonation.

#### *Age, race and sex*

Pearson moment-correlation coefficients were calculated to assess the association between age, race and sex of the subjects and their response during the experimental session and unpaired two tailed t-tests were employed to evaluate the sex differences in the several measures utilized.

## Results

### **Effects of the type of the scene**

Paired two tailed t-tests were used to assess the differences in performance during the role play of positive and negative scenarios in speech latency, speech duration, eye contact and voice intonation.

Table 1 shows the Means and SD in non-verbal measures by type of scene registered during the first session. Latency of speech ( $t = 3.67$ ,  $p < .0004$ ), speech duration ( $t = 7.39$ ,  $p < .0001$ ) and eye contact ( $t = 5.36$ ,  $p < .0001$ ) were significantly different depending on the scene content, with negative scenes showing a longer latency and duration of speech. Entonation was not influenced by the content of the social interaction. Because the differences

found, the data for positive scenes were analyzed separately.

**Table 1.** Means and SDs of non-verbal measures by type of scene during the first session of role play

	TYPE OF SCENE			
	POSITIVE		NEGATIVE	
	MEAN	SD	MEAN	SD
speech latency	1.1	.41	1.48	.6
speech duration	5	2.5	11.73	6.6
eye contact	2.17	1.8	4.62	3.9

### **Assertiveness Levels**

Combining men and women, the median score on the Rathus Assertiveness Schedule was 6, the mean for the whole group was 7.14 (SD=24.76) and the scores ranged between -59 and 57. This range is similar to the -52 and +49 published by Rathus (1973) for the sample he used to validate the schedule. The overall evaluation done by the observers (Mean=3,SD=1.1) and the verbal content (Mean=3, SD=1.3) placed the participants on an average level of assertiveness.

### **RAS x other Measures**

Table 2 shows the RAS scores by race and sex of the participants. Although the means for the female participants ( $M=12.34+21.43$ ) were higher than the males ( $M=-4.52+23.96$ ), specially that of the white female subjects ( $M=17.11+17.61$ ) the differences did not achieve significance ( $F=1.74$ ,  $p=.16$ .NS). Bartlett's test applied to test the homogeneity of variance revealed no significant difference among the SDs ( $B=5.46$ ,  $p=.14$ .NS).

**Table 2.** Ras scores by race and sex of the participants

	MALE		FEMALE	
	MEAN	SD	MEAN	SD
white	7.29	23.83	17.11	17.61
black	-1.37	23.17	-1.61	32.64
ALL PARTICIPANTS: MEAN = 7.14, SD = 24.76				

Significant correlations were found between the scores on the RAS and speech latency and eye contact during the positive scenes ( $r = .26$  for eye contact and  $r = -.26$  for speech latency,  $p = .04$  for both) but not during the negative ones. Speech duration and intonation did not correlate significantly with the RAS scores and no significant relationship was found between the Rathus Assertiveness Schedule and the rating given by the two judges or between the RAS and the verbal behavior measure. Subjects with high RAS scores were compared with those with low assertiveness scores in their performance on the non-behavioral measures. Significant differences were found between them on speech latency, both in negative scenes ( $t = 2.28$ ,  $p = .02$ ) and positive ( $t = 3.97$ ,  $p = .0002$ ), but not on the other measures.

#### Correlations between assertion measures

Table 3 shows the significant correlations found between pairs of different assertion measures. It also shows the significant correlations between age/verbal scores and between age/observers' rating. The verbal content of the interactions score was found to be positively associated with the observers' assertiveness ratings ( $r = .50$ ,  $p = .001$ ), eye contact in negative scenes ( $r = .26$ ,  $p = .04$ ) and speech duration also in negative scenes ( $r = .28$ ,  $p = .04$ ). Observers' assertiveness ratings were negatively associated with speech latency ( $r = -.41$ ,  $p = .003$ ); and positively correlated with eye contact ( $r = .28$ ,  $p = .03$ ).

**Table 3.** Significant correlations between assertion measures and age

	Ras	Verbal Score	Observers' Rating
Verbal score			.5
Eye contact (neg. scenes)		.26	.28
Eye contact (pos. scenes)	.26		
Speech duration (neg. scenes)		.28	
Speech latency (pos. scenes)	-.26		-.41
Age		-.31	-.32

#### Age

Negative correlations were detected between age and the observers' ratings ( $r = -.32$ ,  $p = .013$ ) and between age and the verbal content of the interactions rating ( $r = -.31$ ,  $p = .02$ ). No significant difference was found between scores on the RAS and age ( $r = .006$ ,  $p = .96$ ).

#### Sex and Race Differences

Significant sex differences were found in speech duration during the positive scenes, where men spent more time talking as compared to their female counterparts ( $t = 2.11$ ,  $p = .03$ ) and in intonation both in positive ( $t = 2.48$ ,  $p = .016$ ) and negative scenes ( $t = 3.67$ ,  $p = .0006$ ) where the women were evaluated as presenting more lively intonation in their interactions. No significant race differences were found.

#### Stability of Assertion levels

Repeated-measure analyses of variance showed that there was no significant difference in assertiveness measures over the three sessions, indicating the stability of the responses given by the subjects during the role play behavioral test, as shown on Table 4.

**Table 4.** Means of behavioral measures over 3 sessions on negative and positive scenes

Negative Scenes	Session 1	Session 2	Session 3		
Speech latency	1.48	1.56	1.49		
Speech duration	11.73	11.10	12.73		
Eye contact	4.62	3.46	4.74	4.7	4.8
<b>Positive Scenes</b>					
Speech Latency	1.07	1.14	.95		
Speech duration	4.94	4.76	5.06		
Eye contact	2.17	1.35	1.85		
<b>For both types of scenes</b>					
Verbal Scores	1.94	2.11	2.27		

## Discussion

In the present study, subjects who were evaluated by two observers as being more assertive tended to respond more quickly to the confederate's remarks in the negative scenes, to look longer in his eyes while speaking, were more capable of expressing positive affect, showed less compliance and were able to defend their rights more forcefully in the role play situations than the low assertive individuals. Assertiveness and age correlated negatively. Additionally, they had a higher rate of requests and less compliance during the negative scenes and showed more praises, appreciation or approval in the positive scenes.

Although the literature indicates that expression of positive affect is as much a part of the assertiveness concept as is the expression of negative feeling and forceful goal-oriented behaviors, Hersen et al (1978) reported that speech duration was greater during negative content scenes indicating the potential for differential effect depending on the content of the social interactions. The present experiment confirms this finding in that the participants differed in speech latency and duration, as well as in the length of eye contact, depending on whether the scene had positive or negative content. These results lend evidence to the fact that assertive behavior is situationally determined, when the situation required a forceful, goal oriented response or the expression of negative feelings, subjects took longer to respond and did so in a lengthier manner. However, the fact that people with very low scores on the RAS took longer to respond and maintained less eye contact suggests that unassertive people have difficulty with situations that involve the expression of positive affect. The data indicates that for the person with average or above RAS scores negative scenes require more time to elicit a verbal response, but for the unassertive individuals the positive scenes are difficult to respond to and their latency of speech is longer in positive scenes when compared to assertive individuals.

The reliability of the assertiveness expression over the three role play sessions was found in all measures, not only in relation to verbal but also to non-verbal behaviors. This was seen for the group as

well as for the individuals *per se*, showing that a person's level of assertiveness is quite stable over similar situations, although it varies depending on the content of the interactions. Such findings lends evidence in favor of specialized programs that might be useful in helping less assertive individuals to become more capable of dealing with the social challenges of everyday life.

The correlation found between the observers' rating and the verbal content of the interactions score was expected since the first took into consideration both verbal and non-verbal behaviors as components for the assessment. The finding that the rating given by the two observers and the verbal content of the interactions scores, which were significantly correlated, did not correlate with the scores on the RAS raises some questions, mainly because they were elaborated specifically to cover the types of assertive behaviors mentioned by Rathus (1975) as comprising "assertiveness". The verbal content of the interactions score, for example, was calculated on the basis of the occurrence of such behaviors and the observers' rating represented an overall impression of the two observers who also used Rathus' concept of assertiveness. The findings could not be attributed to error in measurement since the stability of the measures was confirmed over three sessions of role play. One possible explanation could be attributed to the fact that the RAS is a self-report measure, while the other two evaluations were performed by observers on the bases of actual behaviors occurring during the role play session. It could be that subjects behaved in the role play session more assertively, in terms of the verbal content of their interaction, because they were being observed and video-taped and might have felt the need to show that they were able to fight for their rights. The answers for the RAS were obtained in private by the first author. It also needs to be taken into consideration that, as Arrindell et al. (1988) and McCartan & Hargie (1990) mention, assertiveness is a multifactorial concept that needs multidimensional measurements. It is possible that the RAS, the observer rating and the verbal content of the interactions scores tap different assertiveness components. **An additional possibility to explain the lack of correlation found between subjective**

**assessment, as reflected in the RAS scores, and the objective measures of assertiveness in role playing could be related to the fact that self-report measures naturally demand some degree of self-evaluation, which a person may not be willing or interested in conducting outside a therapeutic process. In this way, the objective measures might be more representative of the person's functioning level in assertiveness.**

Several authors have reported the role play technique as a reasonable substitute, in some circumstances, for the behavioral assessment in the natural environment (Bornstein et al., 1977; Hersen and Barlow, 1976, chapter 4; Wolpe, 1969; Hersen et al., 1978), but the relationship of role played assertive behavior and actual assertive-responding in real life remains to be determined. In this manner, which score is more representative of the real assertiveness level of the individuals, as evaluated in the present study, remains to be elucidated.

In summary, the findings of the present study point to the multidimensional aspects of assertiveness and emphasize the need of using more than one assertion measure when evaluating the assertiveness level of adults. It seems that a more comprehensive measure involves assessing not only the verbal content of interactions but also their non-verbal components, such as eye contact, speech latency and speech duration. Considering the negative correlation found between age and the observer assertiveness rating, as well as between age and the verbal content scores, it also seems necessary to further study changes in the levels of assertiveness that might occur with maturity. It is possible that more mature individuals find alternative ways of being assertive or that they develop different inter-personal skills to deal with social challenges.

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