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### Temperamental Determinants of Social Competencies

**Abstract:** The research concerned the determinants of social competencies, which are significant indicators of the quality of interpersonal relations. The aim of the study was to verify the connection between social competencies and temperamental traits. The respondent group included 220 university students of different faculties aged 19-24. Social competencies were measured with the use of a Social Competencies Questionnaire (SCQ) by Anna Matczak, while temperamental traits were measured with The Formal Characteristics of Behaviour-Temperament Inventory (FCB-TI), by Bogdan Zawadzki and Jan Strelau. The research proved that activity, emotional reactivity and sensory sensitivity are significant predictors of social competencies. The predictive value of these traits differs depending on the kind of measured competency.

**Key words:** social competencies, temperament

The fact that social competencies determine an individual's effective functioning among other people is unquestionable. The importance of so-called soft competencies may be proved, for example, by the increasing demand for workshops improving such skills. The effectiveness of influences aimed at training social competencies is not only dependent on the creativity and professionalism of coaches, but also – perhaps mostly – on knowing the determinants of those competencies, their stimulators and inhibitors.

What divides the authors who take up the subject of social competencies is the issues related to the nature and structure of competencies (Argyle, 1999; Kowalik, 1984; Matczak, 2007; Maxim, Nowicki, 2003; Miller, Omens, Delvadia, 1991; Raven, Stephenson, 2001; Riggio, 1986; Rose-Krasnor, 1997; Spitzberg, Cupach, 1989; Wojciszke, Pieńkowski, 1985; Zhou, Ee, 2012). The common thing, in turn, is the shared view of the origin and function of social competencies.

Some of the authors include dispositions traditionally understood as abilities in their social competencies models. Most often these are emotional and social intelligence, and the particular abilities they are composed of, as well as motivation (Greenspan, 1981; Maxim, Nowicki, 2003; Riggio, 1986; cf. Martowska, 2012).

In this work, social competencies are understood as complex skills allowing the individual to function successfully in various social situations (Matczak, 2007). In her concept, Anna Matczak distinguished three kinds of social competencies: competencies determining effective behaviour in intimate situations, competencies which require assertiveness, and competencies determining effective behaviour in social exposure situations (Matczak, 2007). This effectiveness is measured by goal achievement, satisfaction with social interactions and the adequacy of behaviours to social standards (Matczak, 2007; Rose-Krasnor, 1997; Spitzberg, Cupach, 1989). These competencies are differentiated from abilities and motivation, treated as the determinants of social competencies (Martowska, 2012).

Thus, one of the conditions of effective social functioning is the possession of emotional and social abilities which allow the individual to take up socially competent behaviour. Still, even with equal possibilities, people do not achieve the same results in their functioning, including social functioning. What causes the differences is the varied intensity of social skills training.

Social training may be either natural or organized. Natural social training takes place as part of everyday interaction with other people in real life situations. Organized training takes place in artificial conditions, and its aim is to optimize social behaviours and/or correct

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bad habits (Argyle, 1999; Matczak 2007). It is obvious that the acquisition and development of various social competencies requires properly varied training. For example the competencies determining effective dealing with intimate situations are developed thanks to experiences resulting from close interpersonal relations, connected with advanced self-expression (e.g. by confiding in someone, listening to someone's confessions, providing and receiving support etc.). Training such abilities can occur either naturally (e.g. in friendship or love relationships) or in an organized way, for example through practicing strategies of establishing relations, sending and receiving messages, or eradicating the tendency to nod excessively. As for training competencies determining effective behaviours in social exposure situations, in which an individual is a potential object of interest or judgement of others, it can mostly be concentrated on the development of self-presentation skills and response to criticism. Assertive competencies develop in situations when the achievement of one's own goals (including protection of one's rights) without violating the rights of others is essential. Training in such competencies can involve, e.g. learning not to use an aggressive tone of voice, or avoiding unnecessary explanations for one's conduct (Argyle, 1999; Matczak, 2007; Smółka, 2009; cf. Martowska, 2012).

Different people undergo social training of various intensities, which results to a considerable degree from differing levels of motivation towards making social contact. The motivation depends, among other factors, on the temperamental traits determining the need for stimulation, since interpersonal contact is a source of strong stimulation (Matczak, 2001).

This article is devoted to the temperamental determinants of social competencies.

The results of previous studies indicate that personality and the temperamental traits which may determine one's readiness to take up intensive social skills training (or lack of such readiness) are extraversion-introversion, neuroticism, openness to experience, social fear, emotional reactivity and activity (Bandura, 1986; Elias, 1981, 1992; Eysenck, Eysenck, 1985; Leary, Kowalski, 2001; Matczak, 2004; Riggio, Throckmorton, DePaola, 1990; Smółka, 2009; Strelau, 2001, 2002, Zalewska, 2011). For example, Smółka (2009) found some differences between introverts and extroverts regarding the competencies which determine effective dealing with situations requiring social exposure (with extroverts performing better). Another study (Matczak, Martowska, 2009) yielded similar differences: introverts had lower results for social competencies (social exposure, assertiveness and the general level of social competencies) than extroverts. It seems that the common feature of all the traits responsible for social skills training readiness is that they are related to the need of stimulation. High need of stimulation (characteristic for extroverted, active people open to experience) may intensify social contact, thus promoting the training of one's own social competencies. Low need of stimulation, which seems to be typical for introverted, reactive and neurotic people who experience

excessive fear in social situations, may lead to limiting or avoiding social contacts, especially those which are related to social exposure or those which require assertiveness (Martowska, 2012; Matczak, Martowska, 2009; Zalewska, Marszał-Wiśniewska, 2011). Obviously, greater need of stimulation can be satisfied not only through social activity but also, for example, through extreme sports or even in ways that break commonly accepted roles or principles and are thus socially unaccepted. Moreover, it should be remembered that social competencies involve different skills whose development requires actions with varied stimulation values. For example the kind and level of skills needed in close interpersonal relations may be determined to a greater extent by traits and abilities other than those related to the need of stimulation. Certain motivating factors (e.g. values) may in a way operate against the personality and temperamental inhibitors, making introverted or reactive people take up intensive social skills training. This is confirmed, among others, by the results of studies on voluntary work, showing that the most frequent reason for engaging in activity for the benefit of others is the fact that this activity conforms to one's system of values (Hodgkinson, Weitzman, 1990; Snyder, Omoto, 1992).

The results of recent studies may also prove that personality indicators of social competencies may differ between people of different ages. It was found that in teenagers neuroticism is the best predictor of social competencies, whereas in adults the best predictor is extraversion and openness to experience, which might suggest that the level of social competencies in teenagers is reduced by neuroticism and in adults reinforced by extraversion and openness to experience (Martowska, 2012).

Studies concerning the relationship between natural social skills training and social competencies are worth mentioning. The study by Matczak and Martowska (2009) proved that people strongly involved in social activities at their places of work or study have higher results in the level of general social competencies and competencies determining effective functioning in situations requiring social exposure and assertiveness than people who are not involved. A positive correlation was also found between the intensity of natural social skills training and social competencies (Matczak, 2007; Matczak, Martowska, 2013). The study by Smółka (2009) is a good example of the relationship between organized social training and social competencies. The author trained a group of introverts in the social competencies necessary in social exposure situations. It was proven that even after working for a short-time they managed as well as extroverts, who had had much better results in the pre-test.

To sum up, it may be concluded that social skills training, which is the direct cause of the development of social competencies, occurs thanks to both instrumental dispositions (the individual's abilities which determine the possibility to cope with the social world) and to motivational dispositions (all the subjective factors affecting the inclination to taking up social skills training).

## The study problem and hypotheses

Previous studies (Martowska, 2012; Matczak, 2007), conducted with girls aged 17-18 and adults aged 19-40, provided some data to confirm the relationship between temperamental traits (measured with the FCB-TI questionnaire) and social competencies (measured with the Social Competencies Questionnaire). The studies were then replicated in another group – a group of students – homogeneous regarding age, balanced regarding gender and varied regarding courses of study. Besides, unlike in the previous studies mentioned above, the researchers carried out analyses in order to isolate temperamental predictors of particular competencies, and not only their general level.

The following assumptions were made: (a) The direct reason for individual differences in the level of social competencies is different intensity of social skills training, (b) The temperamental traits which are responsible for the readiness to take up interpersonal contacts are the factors which determine the intensity of social skills training.

Data from the literature of the subject prove that emotional reactivity, manifested in emotional sensitivity and the intensity of reaction to emotogenic stimuli, as well as in low resistance, may be particularly unfavourable for the development of social competencies (Matczak, 2001, 2004). This resulted in formulating hypothesis (1): *the higher the emotional reactivity, the lower the social competencies*. The psychological literature says that one temperamental trait which can promote intensive social skills training (and thus, practicing social competencies) is activity (Matczak, 2001, 2004), meaning the tendency to take up behaviours with high stimulation value or ensuring strong external stimulation (Zawadzki, Strelau, 1997). On the basis of these data, hypothesis (2) was formulated: *the higher the activity, the higher the social competencies*.

## Method

### Participants and procedure

220 participants (110 females and 110 males) aged from 19 to 24 ( $M = 21.08$ ;  $SD = 1.42$ ) took part in the study. The respondents were students of various faculties and came from various regions of Poland, both towns and villages. The study was individually executed. The participants were informed of the objective of the study, the fact that it was anonymous and voluntary, and of the application of the study results.

### Measures

A self-descriptive Social Competencies Questionnaire by Anna Matczak (2007) was used to measure social competencies.

The questionnaire comprises 90 items, including 60 diagnostic ones (referring to social activities and tasks) and 30 non-diagnostic ones (referring to non-social skills). The respondent rates their own coping with the tasks on a four-level scale: *very good, quite good, rather poor* and *very poor*. The diagnostic items of the questionnaire make three

detailed scales: competencies which determine effective functioning in intimate situations – *intimate competence* (e.g. “*Hugging a person who needs consolation*”, Cronbach’s  $\alpha = .74$ ;  $.82$  – depending on the group), competencies which determine effective functioning in situations requiring social exposure – *social exposure competence* (e.g. “*Speaking in public*”,  $\alpha = .88$ ;  $.91$ ), competencies which determine effective functioning in situations requiring assertiveness – *assertive competence* (e.g. “*Refusing to lend money to a friend*”,  $\alpha = .83$ ;  $.87$ ). A general coefficient for social competencies, involving all the results obtained in all 60 diagnostic items, was also calculated ( $\alpha = .93$ ;  $.95$ ).

A self-descriptive FCB-TI questionnaire by Bogdan Zawadzki and Jan Strelau (1997), developed on the basis of the Regulative Theory of Temperament (RTT) by Strelau (1985, 1993), was used to measure temperamental traits. It comprises 120 items, 20 for each of the 6 scales: briskness (the tendency to react quickly and maintain high speed, e.g. “*I usually manage to jump away to avoid getting splashed by a passing car*”, Cronbach’s  $\alpha = .77$ ), perseverance (the tendency to continue or repeat behaviours despite a change or disappearance of the stimuli which evoked them, e.g. “*I keep having the same persistent thought in my mind*”,  $\alpha = .79$ ), activity (the tendency to take up highly stimulating behaviours or behaviours ensuring strong external stimulation, e.g. “*I try to arrange my holidays so as to have a lot of adventures*”,  $\alpha = .83$ ;  $.84$ ), emotional reactivity (the intensity of reactions to emotion-evoking stimuli, e.g. “*I lose my self confidence when I’m criticized*”,  $\alpha = .82$ ;  $.83$ ), endurance (the ability to react adequately in situations which require long-term or highly stimulating activity, e.g. “*I stay fresh and energetic even after a long trip*”,  $\alpha = .85$ ) and sensory sensitivity (the ability to react to weak sensory stimuli, e.g. “*I can see the stars twinkling*”,  $\alpha = .73$ ).

## Results

Table 1 presents the means, standard deviations, and correlation coefficients for social competencies and temperamental traits.

**Table 1. Descriptive statistics and temperamental correlates for temperamental traits and social competencies**

Variables	<i>M</i>	<i>SD</i>	7	8	9	10
1. Briskness	14.55	3.51	.03	.21*	.25*	.23*
2. Perseveration	14.31	3.84	.04	-.11	-.17	-.10
3. Sensory sensitivity	15.07	3.66	.22*	.13	.19*	.22*
4. Emotional reactivity	10.09	4.57	-.04	-.37*	-.28*	-.28*
5. Endurance	9.55	4.87	.03	.26*	.23*	.23*
6. Activity	10.12	4.81	.23*	.31*	.37*	.40*
7. Intimate competence	43.41	6.71				
8. Social exposure competence	52.23	9.18				
9. Assertive competence	47.46	7.89				
10. General level of social competencies	174.42	22.27				

Note: \*  $p < .05$ .

The comparison of mean results obtained from the participants with the results of normalization studies of FCB-TI (Zawadzki, Strelau, 1997) and SCQ (Matczak, 2001) leads to the conclusion that they are actually similar.

The data presented in Table 1 prove that activity moderately correlates with all kinds of social competencies, whereas briskness and endurance correlate positively and rather weakly with the competencies which determine effective coping with situations of social exposure and situations requiring assertiveness, as well as with the general level of social competencies. Emotional reactivity, in turn, correlates negatively with social competencies (except the ones determining effective functioning in intimate situations). A positive (yet weak) relationship was found between social competencies (intimate and assertive) and sensory sensitivity. The obtained results are very similar to the results of a study on a group of adults aged 19-40 (Martowska, 2012). However, in that study no correlation was found between social competencies and sensory sensitivity.

In order to find the predictors of social competencies, multiple regression analysis was carried out for particular kinds of social competencies. In the first stage, all the temperamental traits were included in the model. The variables which had proved insignificant were excluded in the second stage of the analysis. The results are presented in Table 2.

Generally, the obtained results confirm both hypotheses; they also prove a relation between social competencies and sensory sensitivity.

The best predictors of the general level of participants' social competencies were activity, emotional reactivity and sensory sensitivity. Emotional reactivity

appeared in the regression model with a minus sign for the corresponding beta weight, which means that the higher the emotional reactivity, the lower the social competencies. It is worth noting, however, that activity proved to be the strongest predictor. Three predictors account for 21% of the variability of the results achieved by participants in the Social Competencies Questionnaire. The proposed model proved to fit the data well  $F(3; 216) = 20.65; p < .01$ .

As for the competencies which determine effective functioning in intimate situations, activity and sensory sensitivity proved to be the best predictors, yet they only account for 8% of the variability of the results. The proposed model proved to fit the data well  $F(2; 217) = 10.48; p < .01$ .

Emotional reactivity (with the minus sign for the corresponding beta weight) and activity proved to be predictors of social competencies which determine the effective functioning in social exposure situations. Both predictors account for 17% of the variability of the results achieved by the participants on that scale. The proposed model proved to fit the data well  $F(2; 217) = 69.57; p < .01$ .

As for the competencies which determine effective functioning in situations which require assertive behaviours, activity and sensory sensitivity were the best predictors. They account for 15% of the variability of results on the assertiveness scale.  $F(2; 217) = 19.83; p < .01$ .

## Discussion

The correlations found between temperamental traits and social competencies are similar to the ones obtained in previous studies (Martowska, 2012; Matczak, 2007). Generally, the relationships between social competencies and activity (positive) and emotional reactivity (negative) appear to be the most consistent, whereas there is no relationship between competencies and perseverance

**Table 2. Temperamental predictors of social competencies**

Outcome variable	Predictor variable	B	SE B	$\beta$
General level of social competencies	Constant	152.65	6.96	
	Activity	1.49	.29	.32*
	Emotional reactivity	-.97	.31	-.20*
	Sensory sensitivity	1.09	.37	.18*
Adj.R <sup>2</sup> = .21				
Intimate competence	Constant	35.26	1.96	
	Activity	.28	.09	.20*
	Sensory sensitivity	.35	.12	.19*
Adj.R <sup>2</sup> = .08				
Social exposure competence	Constant	53.93	2.09	
	Emotional reactivity	-.61	.13	-.30*
	Activity	.44	.12	.23*
Adj.R <sup>2</sup> = .17				
Assertive competence	Constant	37.12	2.22	
	Activity	.51	.10	.35*
	Sensory sensitivity	.30	.14	.14*
Adj.R <sup>2</sup> = .15				

Note: \*  $p < .05$ .

(apart from a negative correlation between that trait and the competencies necessary for social exposure among secondary school girls, cf. Matczak 2007). Correlations between social competence and briskness, endurance and sensory sensitivity are less consistent (the latter did not prove to be correlated with social competencies only in Martowska's studies, cf. Martowska, 2012).

Correlations between temperament and social competencies found in the group of university students are weaker than those among secondary school students (Matczak, 2007) and similar to those obtained in the group of adults (Martowska, 2012).

Interpretation of the obtained data leads to the conclusion that temperamental traits proving high capacity for processing stimulation and high need for stimulation (namely, high endurance, activity and briskness and low reactivity) promote the development of social competencies. The correlation character of the research does not allow for drawing conclusions regarding causes and effects. Still, taking into consideration the fact that temperamental traits are primary and biologically-determined, it can be inferred that these traits determine social competencies. This interpretation conforms to the assumptions of the Regulative Theory of Temperament by Jan Strelau (1985). The theory says that temperament affects one's preferences concerning situations and activities with a particular stimulation value. Those preferences result from individual capacities for processing stimulation and the need for it (Strelau, 1985; Zawadzki, Strelau, 1997; cf. Elias, 1981).

This is so because temperamental traits may affect the individual's motivation to take up social skills training: low reactive people (with a high need for stimulation) may display a greater inclination to engage in social situations (especially ones which are connected with being at the centre of attention and with potential assessment or criticism from others) and achieve their own social goals than high reactive ones (those with a low need for stimulation). The setting and execution of various social tasks intensifies social skills training and may promote gaining competencies and improving present ones. This may particularly refer to the competencies which determine success in situations which require social exposure and assertiveness. As for emotional reactivity, which intensifies the subjective value of received emotional stimuli, it may hinder intensive social skills training or limit the inclination to it due to the possibility of excessive psychophysiological cost. The potential role of activity and emotional reactivity is proved not only by the correlations but also by the results of regression analysis, in which the two traits were revealed as predictors: activity as a predictor stimulating the development of social competencies, and reactivity as an inhibitor of those competencies (a similar result has been obtained before, cf. Martowska, 2012). These two traits may be less significant for the competencies determining the effectiveness of functioning in intimate situations (a lower prediction strength than in the case of other competencies), but first of all these situations are less stimulating than the situations requiring social exposure and assertiveness; furthermore, the development of skills necessary in those situations

may not really be determined by an increased demand for stimulation but by the inclination to relieve the excessive arousal. It can also be concluded that the development of skills which necessitate the establishment and maintenance of close interpersonal relationships requires an especially appropriate foundation in the form of abilities which are components of emotional and social intelligence, and the knowledge of rules governing the social world, acquired thanks to these abilities.

One interesting result is the revealing of sensory sensitivity in the regression model (apart from emotional reactivity and activity), as it is characteristic of persons who are sensitive to weak sensory stimuli but also emotionally subtle, observant, sensitive and open to the environment (Zawadzki, Strelau, 1997). Sensory sensitivity emerged as a significant predictor of the general level of social competencies, competencies which determine effective coping with intimate situations and situations requiring assertiveness. It can be concluded that the traits allow for insightful observation of the interaction partners and, at the same time, for effective reception of feedback and its appreciation, which gives effective social responsiveness. The connection between sensory sensitivity and interpersonal skills may be proved by the observed correlation between sensory sensitivity and experiential emotional intelligence – acceptance of emotions and empathy (Matczak, Martowska, 2011). The relationship between sensory sensitivity and assertive competencies may be confirmed by the research results which show the relationship between that trait and assertive competencies measured with a new social competencies measuring tool, PROKOS, used among others to evaluate those competencies (Matczak, Martowska, 2013).

The study presented above shows that temperamental traits (which may be called motivational dispositions, as they may determine the inclination to become involved in social skills training) are significant predictors of social competencies. It must be remembered, however, that even equally intensive social skills training (which results from equally developed temperamental traits) will not ensure equal results, and the prediction strength of temperamental traits with respect to social competencies does not exceed 21% in the presented study. It seems that what determines the differences between the effects of social skills training is the abilities which can be called instrumental dispositions, determining the extent to which an individual uses their social experience.

The research presented in the article undoubtedly has a number of limitations. The first of them is the correlation character, which makes it impossible to find cause and effect relations. Secondly, the complete model of social competencies determinants was not verified: the relationship between social skills training and social competencies and temperament was not checked, thus reducing the training only to an intervening variable on the basis of previous study results; the instrumental training determinants (e.g. the role of emotional intelligence) were not considered either. Finally, both groups of variables, temperamental traits and competencies, were measured with

the use of questionnaires. It is worth verifying the whole model in future studies, by using more advanced statistical methods and taking into consideration other indices of social competencies (e.g. observational or performance measures). It seems, however, that despite the limitations, the presented research has some informational value and may contribute to the knowledge on social competencies determinants and the role of temperament.

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