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**DEVELOPOMETRIC REPORT ON PROPERTIES OF AGGRESSIVE
AND WARM-HEARTED DIRECTIVENESS SCALE (DAIS-R)
AND ITS APPLICATION FOR MEASUREMENT OF PARENTAL
COMMUNICATION STYLE**

ABSTRACT

There is much controversy over the definition of directiveness, as well as its impact on human interactions, and parent-child interaction is a focus of special concern in psychology. In this article, the development of the DAIS-R Scale, designed to measure parental directiveness, is reported. The DAIS-R Scale was built to assess the level and type of directiveness, which is defined as an act of speech whose purpose is to encourage a partner into doing something. Two types of directiveness emerged: aggressive and warm-hearted. The research was conducted on the sample consisted of 977 people. The theoretical accuracy of the DAIS-R Scale was verified with the help of Confirmatory Factor Analysis. The scale has good reliability and accuracy. Warm-hearted and Aggressive Scales are negatively correlated. DAIS-R Scale is not correlated with the Ray's *Directiveness Scale*. The scale was used to analyze the communication style of parents. The results reveal that the child's behaviour in kindergarten can be predicted based on the parent's results. Not only did analysis confirm the usefulness of the scale but also decisively demonstrated the crucial influence of parental communication style on children's behaviour.

Keywords: Aggressive Directiveness, Warm-hearted Directiveness

**RAPORT DOTYCZĄCY WŁAŚCIWOŚCI PSYCHOMETRYCZNYCH SKALI
DYREKTYWNOŚCI SERDECZNEJ I AGRESYWNEJ (DAIS-R) I JEJ ZASTOSOWANIA
DO POMIARU STYLU KOMUNIKACJI RODZIELSKIEJ**

STRESZCZENIE

Istnieje wiele kontrowersji wokół definicji dyrektywności, jak również jej wpływu na interakcje międzyludzkie i interakcje rodzic-dziecko, która jest przedmiotem szczególnej troski w psychologii. W niniejszym artykule przedstawiono skalę DAIS-R, przeznaczoną

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do pomiaru dyrektywności rodzicielskiej. Skala DAiS-R została zbudowana, aby ocenić poziom i rodzaj dyrektywności, który jest zdefiniowany jako akt mowy, którego celem jest zachęcanie partnera do robienia czegoś. Wyłoniono dwa rodzaje dyrektywności: agresywną i serdeczną. Badania przeprowadzono na próbie składającej się z 977 osób. Trafność teoretyczna skali została zweryfikowana za pomocą konfirmacyjnej analizy czynnikowej. Skalę cechuje wysoka rzetelność. Dyrektywność serdeczna i agresywna są skorelowane ujemnie. Skala DAiS-R nie jest skorelowana ze *Skalą Dyrektywności Raya*. Skala ma zastosowanie do oceny stylu komunikacji rodziców. Prowadzone wcześniej badania ujawniły, że na podstawie wyników rodziców uzyskiwanych w skali można przewidzieć zachowanie dziecka w przedszkolu. Analiza potwierdziła nie tylko przydatność skali, lecz także zdecydowanie wykazała istotny wpływ rodzicielskiego stylu komunikacji na zachowanie dzieci.

Słowa kluczowe: dyrektywność serdeczna, dyrektywność agresywna

NOTION OF DIRECTIVENESS

Directiveness has been a focus of scientific research for approximately one hundred years. The earliest theories on directiveness can be found in Adorno's works and his theory of the authoritarian person. The theory of directiveness was broadened by other researchers, among whom John Ray played a key role. His *Directiveness Scale* was translated into other languages and is commonly used in measures of directiveness (Ray, 1984).

John Ray identified directiveness as aggressive dominance, and designed his scale "to pick out the sort of person who is prone to behave as the Nazis did – in an aggressive, domineering and destructive way towards other people" (Ray, 1984, p. 145). Bastine, Charlton, Grassner and Schwarzel treated directiveness as the opposite of a permissive style (Ray & Lovejoy, 1988), Borgatta and Bohrsnedt described directiveness as the need for achievements (following Ray, 1988), while Lorr and More claimed it to be an aspect of assertiveness (Ray, 1981). According to them, the assertive person "has dispositions and abilities to lead and influence others" (following Ray, 1981, p. 3). Directive style is pointed as one of the important basic teaching styles (Zelina, Bohonyova, & Alberty, 1996).

Deeper analysis of dictionary definitions suggests that directiveness depends on intercultural differences. According to a Polish dictionary, directiveness means "a guideline concerning behaviour: recommendation" (Szymczak, 1978, p. 487). Webster's, a standard American dictionary, describes directive as "tending or intended to direct, indicating direction, a general instruction or order issued authoritatively" (Guralnik, 1986, p. 399).

The main difference is in the word "authoritatively." In the Polish language being directive has no negative connotation – it is simply leading. The word "authoritatively" also has a different connotation and describes a person who receives "respect, [and is] credible, trustworthy" (Szymczak, 1978, p. 102). Webster's describes an authoritative person as "having or showing authority,

based on competent authority, reliable because coming from one who is an expert or properly qualified, asserting authority, fond of giving orders, dictatorial” (Guralnik, 1986, p. 94). The dictatorial person is “autocratic, tyrannical, domineering” (Guralnik, 1986, p. 392).

In the American language, the words directive, authoritative, dictatorial, and tyrannical are synonymous concepts, but they are not in the Polish language, in which an authority is “a person, institution, doctrine having special respect in a certain area” (Szymczak, 1978, p. 102). The American meaning of this word, by comparison, is “the power or right to give commands, enforce obedience” (Guralnik, 1986, p. 94).

Deep semantic analysis of these words allows us to understand how different, although apparently similar, are experiences of directiveness in Polish and American culture. This is why deeper analysis and criticism is so important when considering studies of directiveness.

Nevertheless, due to the broad significance of directiveness, it is crucial to specify a definition of the concept. Ray’s definition, identifying directiveness as aggressive dominance, faced an onslaught of criticism from social scientists around the world, and Ray struggled to defend it. Although he didn’t rule out the possibility that directiveness can have non-aggressive aspects, he admitted that he had not managed to create a scale which would measure such a construct (Ray & Lovejoy, 1988).

Comparison of dictionary definitions of directiveness reveals discrepancies. The *Dictionary of Psychology* describes directiveness as an “act of speech, by which a speaker wants to coax a listener to do something, for example: ‘close the door please’” (Reber & Reber, 2005, p. 172). Searle distinguished directiveness as one of the five acts of speech by which people communicate with each other (Searle, 1983). According to these definitions, even a normal question such as “what time is it?” is directive speech by means of which the speaker coaxes a listener into doing something. A non-directive person avoids situations in which he or she would have influence over others. But apart from when they are avoiding exerting an influence on others, people are directive. While directiveness depends on the situation, the type of directiveness, the way somebody communicates with others, is characteristic of the person and might depend on personality (Rana & Marhorta, 2008).

It could be said that directiveness is the style of exerting influence over others. The opposite of directiveness is non-directiveness, which can be described as the avoidance of exerting influence. As mentioned, two types of directiveness have been distinguished: warm-hearted directiveness and aggressive directiveness. Warm-hearted directiveness is a way of exerting influence that is characterized by a positive attitude toward others, and avoids repulsing and humiliating them. Aggressive directiveness is a way of exerting influence that is characterized by a negative attitude toward others, in which hostile behaviour

and humiliation are applied. This sort of directiveness may have a destructive influence on others.

Due to the ongoing controversy over the influence of directiveness on a child's development (Kuczyński, 1984; Neal & Frick-Horbury, 2001; Rose-Krasnor, Rubin, Booth, & Coplan, 1996; Westerman, 1990), one of the main reasons for creating a new scale is to measure the connection between parental directiveness and a child's behaviour.

THE PURPOSE AND STRUCTURE OF THE DAIS-R SCALE

The DAIS-R is the broadened version of DAIS Scale (Szymańska, 2005, 2011). DAIS-R Scale consists of two scales. The *Warm-hearted Directiveness Scale* includes 28 items, while the *Aggressive Directiveness Scale* includes 24 items. The DAIS Scale thus consists of 52 items in total, which include the Likert Scale.

The scale was designed to assess the level and type of parental directiveness (aggressive or warm-hearted). It distinguishes five dimensions of exerting an influence over a child: conversation, giving orders, giving help, situations when the child or parent asks for something, and situations when the parent gives correction.

Both scales – *Warm-hearted* and *Aggressive Directiveness* – were constructed to include the five dimensions. Indicators were defined, with specific parental behaviours for each dimension of the scale.

Table 1

The way the warm-hearted and aggressive directiveness manifest

	Warm-hearted directiveness manifests itself as follows:	Aggressive directiveness manifests itself as follows:
Correction dimension	On the corrections dimension, the dominant remarks are specific to a preventative method rather than to punishment. They serve to teach, review, and indicate proper behaviours so the child can avoid future failure, but they are expressed in a calm, non-aggressive way.	On the corrections dimension, punishments and reprimands dominate. Remarks are not a particular feature of this dimension. Minor mistakes are often trivialised as long as they become bigger, then punishment is applied. Punishment is the main method of effecting changes.

	Warm-hearted directiveness manifests itself as follows:	Aggressive directiveness manifests itself as follows:
Giving and asking for help dimension	On the giving help dimension, warm-hearted directiveness manifests itself in sensitively responding to child's needs. The parent gives the needed help in the proper amount. On the asking dimension, warm-hearted directiveness manifests itself in open reactions to somebody's requests and the ability to turn to others with requests.	On the giving help dimension, aggressive directiveness manifests itself in non-sensitive responses to the child's needs. The parent gives too much or too little help, and sometimes refuses to give help at all. In addition, the parent may reject help offered by the child. On the asking dimension, aggressive directiveness manifests itself in responding to requests with distaste, and evincing the same distaste when the child must turn to others with requests.
Conversation dimension	On the conversation dimension, warm-hearted directiveness manifests itself in the ability to explain, in patient listening, and in exerting influence primarily by leading conversations and convincing the child of something.	On the conversation dimension, aggressive directiveness manifests itself in escaping from discussions and conversations that could challenge the parent's opinion. The parent is not interested in leading conversations.
Giving orders dimension	On the giving orders dimension, warm-hearted directiveness manifests itself in the ability to give orders in a non-aggressive and calm way.	On the giving orders dimension, aggressive directiveness manifests itself very strongly. Orders are given with pleasure, pressure may be used, and the parent may believe that the child should do nothing but eagerly obey.

NORMALITY SAMPLE

The research was conducted on a sample of 977 people, consisting of 620 women and 326 men. The mean age was 30.16 years. In the group of men, the mean age was 31.2, the dominant was 34. In the group of women, the mean age was 31.14, the dominant was 32.

The study involved a group of parents of preschool children: 47% parents of boys and 53% parents of girls. 4.1% of participants had lower education, 31.1% middle education, 64.6% higher education. 14.85% of participants lived in the country, 44.49% participants lived in the small towns, 40.66% of participants lived in big cities. Children's of 59% of research sample participants attended private kindergartens and 41% public kindergartens.

DESCRIPTIVE STATISTICS

For the two scales, the Kolmogorow–Smirnow test was conducted to check whether the scales had a “normal distribution.” For Warm-hearted Directiveness, $Z(977) = .056$ and $p < 0.005$; for Aggressive Directiveness, $Z(977) = .065$ and $p < 0.005$. The significance proves that both scales do not have a normal distribution in population.

The skewness for Warm-hearted Directiveness is (.008), kurtosis (–.091). The skewness for Aggressive Directiveness is (.134), kurtosis (–.081). Neither skewness nor kurtosis showed discrepancies from normality.

For Warm-hearted Directiveness, the mean is $M = 85.39$ and the standard deviation is $SD = 10.05$, with a standardized error of measurement $SEM = 3.93$. For Aggressive Directiveness, the mean is $M = 56.31$ and the standard deviation is $SD = 10.50$, with a standardized error of measurement $SEM = 3.35$.

VALIDITY

Content validity

To measure the content validity of the scale, a group of competent judges was used. The compliance of the judges was assessed using a method presented by Aranowska, which was designed to measure the homogeneity of assessments of competent judges. The method consisted of two steps. First, the unanimity of the items was estimated with the aid of the λ -Aranowska method. Then, the KAI method was used to estimate the usefulness of the item to the scale (Aranowska, 2005). An item was recommended for inclusion in the scale if it received a score of 0.6 or higher on the KAI , and had a mean greater than 3.5.

Construct validity

It was hypothesized that the *Warm-hearted* and *Aggressive Directiveness Scales* should negatively correlate. This would prove that both types of directiveness and their dimensions are different and measure opposite constructs.

r -Pearson statistics were used to measure correlation. Both scales are negatively correlated at the level $r = (-.417)$, with $p < .005$. T Kendall test reveals that both scales are negatively correlated at the level of $t = (-.326)$, $p < .005$.

Confirmatory factor analysis

Confirmatory Factor Analysis was conducted for the DAiS-R Scale. For the *Aggressive Directiveness Scale* and for the *Warm-hearted Directiveness Scale* two CFA models were conducted separately as both scales are negatively correlated and cannot create one coherent construct. The models were verified with the use of WLSMV robust estimator for categorical data. Its' results presents Table 2 Column 3.

Next, second order Confirmatory Factor Analysis was conducted. Its results presents Table 2 Column 4 and Figure 1.

Table 2
Factor loadings for items in CFA and second-order CFA

		The content of the test items	lambdas	lambdas
Warm hearted	Orders	I have the gift of leadership	.162	
		One can better influence people by listening attentively than by using many words	.291	.756
		I do not like how one governs	.083	
Help		I assist someone when he/she needs it	.466	
		I like answering the questions because I feel that in this way I help others	.657	
		When I cannot cope I ask another person for help	.470	
		People often turn to me with different requests	.516	.754
		I know what my child should begin to learn and help him/her in this	.332	
		People in need of help makes me want to help them	.579	
		I like answering the questions	.720	
		When someone does not understand something, I try to explain it by talking	.691	
		Correction		When someone does not know that he/she makes a mistake I gently turn it to his/her attention
When someone makes a mistake I wait for him/her to understand it and improve	.184			
I am patient	.445			.858
When someone behaves badly I try to change his/her behaviour by explaining things	.602			
I am able to explain things repeatedly	.658			
I can wait until someone fix his/her mistake	.444			
I like explaining things	.689			

		The content of the test items	lambdas	lambdas
Warm hearted	Conversation	It does not irritate me when I have to explain things	.508	.689
		I like to lead lively discussions during which a lot of people learn	.595	
		I talk to the other person when she does not understand something	.651	
		I like to listen when someone wants to convince me to something	.516	
		I like to show feelings and talk about what I experience	.483	
		I listen carefully when someone wants to convince me to something	.416	
		I like to carry on a conversation with my nearest	.647	
		I agree that education consists of a continuous repetition	.345	
		I like taking discussions	.653	
		I gladly discuss with someone who criticizes my opinion	.373	
Aggressive	Orders	It irritates me when I tell someone to do something and he does not do that	.404	.461
		Subordinates should always listen to the boss	.330	
		I appreciate obedience	.319	
		Sometimes, the best method is raised voice	.475	
		When I give the command I try to speak firmly and sound scary	.398	
		I like when children or subordinates fear me	.916	
		I give commands with a raised voice	.605	
	Help	I find unpleasant acceding to the requests of other people	.333	
		People too much expect from others	.471	
		It annoys me when someone continuously asks for something	.651	
		I often quarrel	.729	.792
		If someone does not know something and comes to me for help, I refer him to others	.437	
		When I help someone I like to humiliate him at the same time	.639	
		I prefer to do something by myself than to ask others for help	.058	

		The content of the test items	lambdas	lambdas
Aggressive	Corrections	One should not allow children on too much and rather „hold short”	.304	.620
		I prefer to punish a child once than every now and then give him remarks	.492	
		My parents kept me briefly and I raise my children in the same way, it is the best method	.531	
		I like to mock other people’s mistakes	.781	
		When I give someone remarks I like to add to this some kind of malice	.895	
	Conversation	I am angry when someone does something wrong and I have to tell him that	.522	
		Explanations gives little one has to be firm and consequent	.308	
		I do not lead unnecessary discussion it does not make sense to discuss about irrelevant things	.393	
		I often humiliate others	.812	
		I do not recognize the battle of fists but of words, yes	.191	

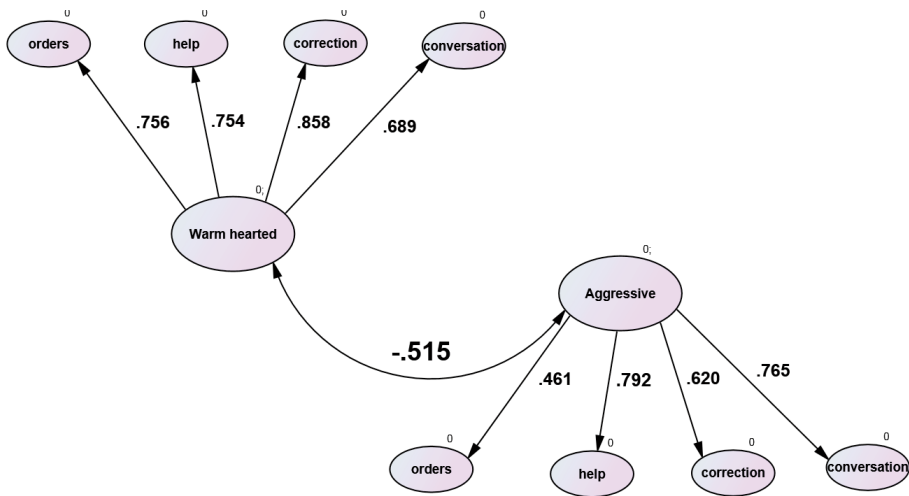


Figure 1. Second order Confirmatory Factor Analysis. Yuan–Bentler robust estimator: $Chi^2 = 90.533$, $df = 19$; CFI = .944; RMSEA = .084.

CFA confirmed that Aggressive and Warm-hearted Directiveness are correlated negatively on the level (-.515).

Reliability

The reliability of the scale was measured using Cronbach's α , which for Warm-hearted Directiveness had $\alpha = .844$ and Aggressive Directiveness $\alpha = .858$. The reliability of the latent variable for the *Warm-hearted Directiveness Scale* was $CR = .908$, variance extracted was $VE = .588$. The reliability of the latent variable for the *Aggressive Directiveness Scale* was $CR = .772$, variance extracted was $VE = .452$.

Correlations with other scales

The DAiS-R was also correlated with Ray's *Directiveness Scale* (DS). Neither the *Warm-hearted* nor the *Aggressive Directiveness Scale* appeared to correlate with Ray's *Directiveness Scale*. Two completely different theoretical constructs for the DAiS-R and *Directiveness Scale* led to a lack of correlation; it can thus be said that the two scales measure completely different theoretical constructs.

The DAiS-R was also correlated with the *Scale of Parental Difficulty* which measures the way in which the parent experiences his/her relationship with the child. It was hypothesised that Warm-hearted directiveness would be positively associated with a good parent-child relationship. Warm-hearted directiveness showed a statistically significant correlation with the *Scale of Parental Difficulty*. The better the relationship experienced with the child by the parent, the higher the score the parent achieved on the *Warm-hearted Directiveness Scale*; conversely, a poorer relationship with the child corresponded to a lower score on the *Warm-hearted Directiveness Scale*. The *Aggressive Directiveness Scale* showed an insignificant correlation with the *Scale of Parental Difficulty*.

Finally, the DAiS was correlated with the PAiNK scale, which is a method of assessing parental control and enforcement of obedience. Warm-hearted Directiveness is positively correlated with parental control, $r = .221$, $p = .042$, while Aggressive Directiveness is positively correlated with non-control, $r = .379$, $p = .001$, and obedience enforcing, $r = -.307$, $p = .008$.

The DAiS Scale was correlated with the *Scale of Social Approval* (Wilczynski & Drwal, 1995). Warm-hearted Directiveness was positively correlated with searching for social approval, $r = .415$, $p < 0.001$. Aggressive Directiveness was not connected with searching for social approval, $r = (-.055)$, $p = .338$; the correlation was statistically insignificant.

Other results

The statistic was used to verify whether differences existed between the degree and type of directiveness used by the group of men versus the group of women. The U Mann-Whitney test for Warm-hearted Directiveness was $U = -1.311$, $p = .190$, and for Aggressive Directiveness was $Z = -2.395$, $p = .017$. The statistic demonstrated differences between men and women only in their use of the aggressive directiveness.

One-way multivariate analysis of variance (MANOVA) was conducted to test differences in types of parental directiveness in groups formed according to child's behaviour at kindergarten. The analysis included two dependent variables (Aggressive Directiveness and Warm-hearted Directiveness) and one independent variable (child's behaviour). The predicted main effect reached significance for all groups. Difficult children's mothers used more aggressive directiveness $F(1,100) = 3.956, p = .024$ and less warm-hearted directiveness $F(1,100) = 16.023, p < .001$, than well-behaved children's mothers. Difficult children's fathers used less warm-hearted directiveness than well-behaved children's fathers $F(1,100) = 11.290, p = .001$. No significant effect was found for fathers' use of aggressive directiveness (Szymańska, 2009).

Moreover, analysis with the use of artificial intelligence algorithms, canonical correlation and discriminant analysis revealed that directiveness is the strongest predictor of preschool children's behavior among such variables as: parental control, obedience enforcement, parent's age, child's age, child's order in family, parent's education level (Szymańska, 2012).

The DAiS Scale has the potential for wide application. It can be used by psycholinguists to measure the potential influence of parental directiveness on a child's language development, and by clinical psychologists to discover the potential impact of parental directiveness on the behaviour of children with ADHD and ADD.

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