PRZEGLĄD PSYCHOLOGICZNY – THE REVIEW OF PSYCHOLOGY
2025, TOM 68, NR 2, 113–132
DOI: 10.31648/przegldpsychologiczny.12043

Scale for Measuring Gender Stereotypes: Construction and Preliminary Validation

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Abstract

Objectives: The aim of the study was to develop and preliminarily validate a new, psychometrically reliable tool for measuring contemporary gender stereotypes. The tool, based on a two-dimensional model of social perception, was adapted to the Polish context and designed to capture the dynamic nature of stereotypes, thereby filling the gap left by outdated instruments.

Method: The process of creating the scale involved the generation of descriptors (traits) by a group of experts, followed by verification and selection of traits in an exploratory study ($N = 309$). Ultimately, 20 adjectives were selected for the tool. In the next two preliminary studies ($N = 276$ and $N = 241$), the structure of the tool was validated.

Results: Analyses have shown that selected traits strongly differentiate the images of men and women. The new scale has a reliable and stable structure and appears to be a credible tool for measuring gender stereotypes.

Conclusions: The tool presented in this article is a novel alternative to existing methods of measuring gender stereotypes in Poland. Preliminary validation confirms its reliability and usefulness, thus opening the way for further research into the dynamics and content of contemporary stereotypes.

Keywords: gender stereotypes, agency, community, femininity, masculinity

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One form of collective mental representations are stereotypes, which include simplified or schematic beliefs about other social groups. They take the form of generalizations that function regardless of how accurate they are in relation to individual members (Judd et al., 1991). Stereotypes are essentially rigid and resistant to change, as they are difficult to verify in contact with specific individuals (Devine, 1989). However, there are certain conditions that allow for the processing of information in a way that leads to the modification of existing stereotypical beliefs. This applies to both significant events (Haslam et al., 1992) and slow social changes (Powell et al., 2002). However, this process is spread out over time and difficult to grasp in the course of everyday observations, which is why it is important to conduct research on the specificity of cognitive representations at a given time and in given socio-cultural conditions (e.g., Bosson et al., 2022).

One example of stereotypes that are closely related to everyday human functioning are gender stereotypes. Gender stereotypes are common beliefs that associate specific gender groups with particular roles and characteristics. They are considered to be deeply rooted in society and difficult to change. However, changing social roles in recent decades suggest that gender stereotypes may also have undergone change (Charlesworth et al., 2022).

Changes in the Perception of Gender Stereotypes

Gender stereotypes include not only perceptions of representatives of both genders but also relate to actual social status and social attitudes and behaviors toward women and men (Deaux & Kite, 2002; Mandal, 2008, 2012). Within each culture, a common set of beliefs about gender is formed, covering various aspects such as gender stereotypes, gender-related social roles, and attitudes towards people of different genders (Wood & Eagly, 2012). The crystallization of beliefs about what women and men are like is a long-term process that varies across cultures and even environments (e.g., Kosakowska-Berezecka, 2024). The current image is therefore not easy to grasp, especially in times of unprecedented spread of various patterns of behavior and lifestyles that we encounter today through the media or direct contact with representatives of other cultural backgrounds (Bajkowski, 2010; Siemieńska, 2005).

Some cross-cultural data challenge the universality of traits considered feminine and masculine (Best & Williams, 1998; Herdt, 2020; Gilmore, 1990; Levant et al., 2003; Spence & Helmreich, 1978). There are studies indicating that even within the United States of America there are differences in what is considered feminine and masculine in different ethnic groups (Hammond & Mattis, 2005; Konrad & Harris, 2002; Ojeda et al., 2008). The history of research on the content of gender stereotypes leads us to assume, first, that the image of representatives of different genders is also variable over time, and second, to postulate the need to conduct research on the specificity of cognitive representations of femininity and masculinity at a given time and in given social conditions. Research on the dynamics of stereotypes embedded in the concept of social roles (Diekman & Eagly, 2000) shows that perceptions of female and male roles, as

well as status and power, change over time in different ways depending on perceived gender (Diekman et al., 2004). Measuring the content of gender stereotypes, as an issue sensitive to cultural context, should first and foremost be adapted to the conditions in which it is to be studied. Although attempts to create measurement scales have been made over the years by researchers from different countries (e.g., Fakunmoju et al., 2016; Laguía et al., 2019; Mills et al., 2012), they will never be universal enough to be applied in every country.

Research on the evolution of the meaning of femininity and masculinity also reveals a certain ambiguity. It seems that over the years, femininity has undergone more profound changes (Wojciszke & Szlendak, 2010) than masculinity (Kosowska-Berezecka, 2015). Global trends show that this change is slow (Kosowska-Berezecka, 2016). A general weakening of traditional gender stereotypes and a shift in prejudices towards neutrality has been observed (Charlesworth & Banaji, 2021), but meta-analyses of gender stereotype questionnaires conducted at different points in time yield ambivalent results. While most show that gender stereotypes are weakening for women, they remain relatively stable for men (Croft et al., 2015; Donnelly & Twenge, 2017). Archival analyses of linguistic data have also indicated that there have been changes in the content of stereotypes over the years, but only for women (Bhatia & Bhatia, 2021). Haines and colleagues (2016) showed that between 1983 and 2014 there were no significant changes in the perception of gender stereotypes. Furthermore, the changing dynamics of male roles depend on the changing concept of masculinity, which, for the time being, is based on the principle of agency and, above all, on avoiding traits associated with femininity (e.g., Rudman & Mescher, 2013). Compared to the stereotype of femininity, the stereotype of masculinity is more consistent and traditional, especially in terms of social roles, while the stereotype of women is richer in content, especially in terms of women's appearance and the professions they pursue (Mandal, 2012). Interestingly, the status of masculinity in different societies is qualitatively different from the status of femininity (Bosson et al., 2021). According to the precarious manhood theory, masculinity is not only determined by biology (as in the case of femininity), but also by social status, which must be constantly acquired and maintained (cf. Vandello & Bosson, 2013). This social construction of masculinity determines certain cultural norms that must be met in order to be perceived as masculine.

Cognitive Representations

The topics discussed here are also reflected in the broader context of research on social perception. The rich literature of recent years describes a considerable amount of empirical evidence indicating that social perception (whether of groups or individuals) is based on two fundamental dimensions (Abele & Wojciszke, 2007; Fiske et al., 2007; Judd et al., 2005; Wojciszke, 2010). Depending on the context of the research, these dimensions vary slightly. For example, in research on social stereotypes (the SCM model), warmth and competence are discussed (Fiske et al., 2002), while in the context of forming judgments about the traits of other people, the dimensions of socially and intellectually good-bad

(Rosenberg et al., 1968) or the assessment of the characteristic usefulness of traits—beneficial to the possessor vs. beneficial to others (Peeters, 1992). Despite some differences in theoretical implications and differences in the interpretation of dimensions, the nature of organizing the perception of social objects seems to be common to all concepts. When referring to traits describing human characteristics, the terms agency and communality can be used, which organize all traits and, as Abele and Wojciszke (2007) emphasize, the importance of each of these dimensions depends on the perspective of self vs. other. Community is a dimension describing characteristics beneficial to others related to motives of cooperation and caring for others, such as friendliness or protectiveness, i.e., characteristics that fit the stereotype of femininity. Agency is a dimension describing traits beneficial from the perspective of the self, related to motives of self-focus and the pursuit of one's own goals, such as intelligence, competence, and resourcefulness, i.e., traits that fit the stereotype of masculinity (Wojciszke, 2010). Similarly, the warmth dimension describes women, and the competence dimension describes men (Chalmers, 2021; Connor & Fiske, 2018). Eagly and colleagues (2020) found that between 1946 and 2018, stereotypes about women's agency intensified in the United States, while stereotypical perceptions of men's agency showed a small and insignificant decline. They explain this by the fact that, despite the simultaneous increase in the representation of women in "male" professions, their overrepresentation in domestic work and care professions (e.g., healthcare; Charles & Bradley, 2009) has not decreased.

The stereotypical attribution of communality to women and agency to men seems to be universal across cultures (Bosson et al., 2022; Kosowska-Berezecka, 2023; Williams & Best, 1990). A similar pattern also applies to differences in self-perception through the prism of gender: in different cultures, women generally rate themselves higher in terms of communal traits than men, and men generally rate themselves higher in terms of agency traits than women (Williams & Best, 1990). It is worth noting that the proposed dimensions of femininity and masculinity (Bem, 1974; Spence et al., 1975) are based on perceptions related to prevailing gender roles and stereotypes, thus traditionally fitting into the concept of two dimensions of cognition, but at the same time subject to change along with social changes.

In summary, in the context of research on gender stereotypes, the concepts of femininity and masculinity are closely related to two fundamental dimensions of social perception: communality and agency. Communality (also referred to as warmth) describes traits that are beneficial to others, associated with motives of cooperation and care, such as friendliness or protectiveness. These traits traditionally fit into the stereotype of femininity. Agency (also referred to as competence), on the other hand, refers to traits that are beneficial from an individual's perspective, associated with motives of self-focus and goal achievement, such as intelligence, competence, and resourcefulness. These traits traditionally fit into the stereotype of masculinity. It is worth noting that the proposed dimensions of femininity and masculinity (Bem, 1974; Spence et al., 1975) is based on perceptions related to prevailing gender roles and stereotypes, thus traditionally fitting into the concept of two dimensions of cognition, but at the same time they are subject to change along with social changes.

Research on Gender Stereotypes

In the Polish research context, numerous attempts have been made to follow the theoretical trends discussed above. However, it should be emphasized that there is still a lack of an up-to-date and methodologically reliable tool for measuring gender stereotypes. The most commonly used tool for this purpose, the *Psychological Gender Inventory* (PGI) by Alicja Kuczyńska (1992), is only a loose interpretation of the assumptions of the *Bem Sex-Role Inventory* (BSRI; Bem, 1974), without fully adapting this tool to the Polish context.

Psychological Gender Inventory

The *Psychological Gender Inventory* (PGI) by Alicja Kuczyńska (1992) is a list of adjectives designed to measure self-definition of gender roles, understood as a spontaneous willingness to use gender dimensions in relation to oneself. This tool was constructed mainly on the basis of Sandra Bem's gender schema theory (1981). Kuczyńska, abandoning the adaptation of the original BSRI tool, decided to create her own research instrument that takes into account the Polish cultural and linguistic context.

The first stage of the work was to identify the content of the cultural stereotype of femininity and masculinity functioning in Polish society. The experimental version of the Inventory included 45 adjectival traits and underwent preliminary empirical verification on a sample of 79 students. The theoretical validity of the tool was assessed on the basis of the PGI results of transgender people (N = 24) in a diverse age range from 18 to 44 years (Kuczyńska, 1992). The design of the tool in question deviates from contemporary methodological standards. First, the two-factor structure of the tool was not obtained on the basis of empirical methods of structure extraction—it was only assumed theoretically and has not been verified. The second significant limitation is the method of verifying the content accuracy. Reservations arise both from the selection of a sample limited exclusively to transgender women, with the simultaneous high heterogeneity of this group, and from the theoretical assumption that their responses would be comparable to the results obtained from male students. Lipińska-Grobelny and Gorczycka undertook to update this tool (2011), but it still only concerns the patterns used for self-description and is not a measure of social perception.

The Aim of Our Research

Taking into account the limitations discussed above, the aim of the present research was to develop a tool consistent with contemporary theoretical approaches based on a two-dimensional model of social perception. At the same time, by referring to the concept of social roles and the dynamic nature of stereotypes, the new tool aimed to capture current representations of gender roles, considering their variability and contextuality in contemporary society.

Methodological Issues Related to Tools for Measuring Gender Stereotypes

Smiler and Epstein (2010) conducted a comprehensive methodological review of tools for measuring gender stereotypes, pointing to contemporary trends in methodology and analysis that should be taken into account when designing such tools. Among the main problems, they mention the low internal consistency of some scales, the lack of confirmatory factor analysis (CFA) for many existing tools, and insufficient consideration of convergent validity in their validation. They also draw attention to the problem of the (in)durability of the tools used over time, citing the BSRI as an example, which, despite its widespread use, is over 50 years old and may not reflect current changes in the perception of gender roles.

Data from numerous studies conducted since the 1970s indicate that BSRI scores have been consistently rising, meaning that respondents are receiving increasingly higher scores on individual scales (Twenge, 1997). Spence and Hahn (1997) even suggested the existence of a ceiling effect in BSRI scores. Research conducted by Holt and Ellis (1998) showed that some traits attributed to femininity in the original version of the tool (e.g., loyalty, childishness) no longer differentiated between genders in studies conducted three decades later. Changing social and cultural conditions clearly indicate the need to revise existing measurement tools or create new ones that consider the specificity of contemporary populations and the current understanding of gender roles (Ciechanowicz, 1990; Hoffman & Borders, 2001; Konrad & Harris, 2002; Swim et al., 1995).

Method

Tool Design

Based on the postulates of contemporary researchers regarding the methodology of measuring gender stereotypes (including Smiler & Epstein, 2010), the authors adopted the following assumptions in their own research: the list of attributes specific to women and men cannot be intuitive, resulting from existing stereotypes—by definition, cognitive representations undergo dynamic changes; researchers must therefore obtain as comprehensive, rich, and diverse a set of characteristics as possible that are currently considered to be attributes characteristic of representatives of different genders; there is a need to obtain information on the extent to which the obtained dimensions are considered prototypical (specific) for women and men by a given research subject; The aim of the research was: (1) to develop a reliable tool for measuring contemporary cognitive content of gender representations (attributes specifically associated with a given gender) (2) to capture the contemporary content of images of a “typical” woman and a “typical” man.

Procedure

The tool was developed in several stages. In the initial phase, two methods were used to generate descriptors—features and terms relevant to the description

of gender—which served both a descriptive and a differentiating function. Next, an exploratory study was conducted on a large sample, the aim of which was to aggregate the collected items and identify the structure underlying the tool being developed. In the final stage, validity tests and a series of confirmatory analyses were carried out to verify the structure of the tool.

Generation and Preliminary Aggregation of Test Items

In order to create an initial pool of items, 10 people (5 women and 5 men) were asked to create lists of at least 30 characteristics or adjectives that, in their opinion, most accurately describe men and women. In total, the respondents generated 328 traits, including 197 traits describing women (average number of occurrences of traits $M = 1.81$, $SD = 1.59$) and 185 traits describing men ($M = 1.80$, $SD = 1.63$). The collected terms included both positive traits (e.g., good, charming, friendly) and negative traits (e.g., ruthless, quarrelsome, greedy). In addition, six participants in a research seminar on gender stereotypes, held as part of a course at the University of Warsaw, were involved in the process of generating items. These participants generated a total of 56 additional items.

The pool of items was created on the basis of both generated lists, and then, taking into account the number of occurrences (both absolute and differences between the lists of terms typical for men and women), 46 traits that occurred most frequently were selected. All selected traits were positive in nature. It turned out that negative traits were relatively rare—none of them met the established criteria and were therefore not included in the final version of the tool.

Exploratory Study

The aim of the exploratory study was to identify the structure and design of the tool based on factor analysis of the collected data. The study was conducted between October 2007 and May 2008 among university students, mainly during classes. The selection of participants for the exploratory study was a convenient one, carried out mainly during classes at various universities. Although this is a non-representative sample, the decision was based on a strategic desire to achieve a certain homogeneity in terms of age group (students), which allowed for control of demographic variables, while at the same time striving for diversity of interests by including students from different fields of study. The exclusion criterion was studying psychology beyond the first year of study in order to minimize the impact of prior theoretical knowledge of stereotypes on the results obtained. The questionnaires were distributed among students with the consent of the lecturers, which made it possible to collect a diverse sample in terms of fields of study and age. A total of 309 people (152 men and 157 women) were surveyed. $M_{age} = 26.36$, $SD = 10.07$. According to the recommendations in the literature (e.g., Costello & Osborne, 2005; Tabachnick et al., 2007), the minimum

recommended n/p ratio is 5:1, while 10:1 is considered optimal. The ratio adopted in this study is approximately 6.7 persons per variable, which is above the minimum threshold and provides sufficient statistical power to reliably identify the factor structure. In addition, the absolute number of respondents exceeds the often-cited threshold of 300 people, which is considered a "good" benchmark for assessing the adequacy of a sample for factor analysis (Comrey & Lee, 1992). The validity of the analysis is further confirmed by the obtained communalities, which exceeded .60 for the vast majority of items, with an average of .71 (MacCallum et al., 1999, 2001).

Procedure

The questionnaire used in the study was adapted to the gender of the respondents, with appropriate forms of adjectives used depending on the version (female and male versions). The questionnaire was constructed in two versions. In the first version, women were assessed first, followed by men (AB), while in the second version, men were assessed first, followed by women (BA). The respondents received the questionnaire version at random.

The task of the respondents was to indicate how often each of the 46 characteristics presented was used to describe women and men. The respondents answered on a scale from 1 (*very rarely used*) to 5 (*very often used*).

The selection of participants for the exploratory study was deliberate and took place mainly during classes at various universities. The exclusion criterion was studying psychology beyond the first year of study in order to minimize the influence of prior theoretical knowledge of stereotypes on the results obtained. The questionnaires were distributed among students with the consent of the lecturers, which made it possible to collect a diverse sample in terms of fields of study and age.

Results

A series of factor analyses were performed using the principal axis method with orthogonal rotation (Varimax). The number of factors extracted was determined using a scree plot, parallel analysis comparing the structure of the data set to parallel random data sets (with identical parameters N*k), and *Velicer's Minimum Average Partial* (MAP) test (1976) based on the analysis of partial correlation matrices. Compared to classical methods, the latter two procedures are considered to be much more effective in extracting the correct structure from the data (O'Connor, 2000; Velicer et al., 2000). All three methods yielded similar results, and ultimately a two-factor solution was adopted. Then, based on factor loadings (low or relatively evenly distributed across factors – cross-loadings), the number of items was reduced to 20. Table 1 (p. 121) presents the factor loadings.

Table 1

Factor Loadings for the Final Version of the Gender Stereotype Measurement Tool

	Women's attributes		Men's attributes	
	Femininity	**Masculinity**	**Femininity**	**Masculinity**
Sensitive	**.82**	–.10	.09	**.65**
Delicate	**.81**	–.13	–.05	**.66**
Affectionate	**.80**	–.02	.03	**.69**
Loving	**.75**	–.10	.17	**.60**
Subtle	**.73**	.10	–.03	**.59**
Warm	**.72**	–.02	.07	**.64**
Caring	**.70**	.05	.26	**.58**
Cute	**.69**	–.04	–.04	**.63**
Gentle	**.69**	.04	–.10	**.63**
Pretty	**.55**	.01	–.05	**.52**
Brave	–.13	**.74**	**.72**	–.01
Strong	–.10	**.66**	**.71**	–.09
Firm	–.17	**.65**	**.58**	–.06
Responsible	.04	**.61**	**.60**	.18
Hard-working	–.10	**.52**	**.59**	.16
Ambitious	.02	**.52**	**.46**	.02
Athletic	.21	**.51**	**.67**	–.10
Witty	.27	**.49**	**.48**	.11
Handsome	–.09	**.47**	**.68**	–.03
Tall	.10	**.45**	**.64**	–.01
Explained variance	18.54%	15.29%	17.31%	15.89%
Cronbach's α	.90	.76	.87	.89

Note. Bold font indicates factor loadings of items in the scales to which they were ultimately included.

The factor loadings in both solutions (for male and female assessments) indicate that the arrangement of items on the scales is similar. At the same time, reliability analyses indicate relatively high internal consistency of the obtained dimensions. Specifically, the internal consistency of the scale measuring feminine traits (the communality dimension) was $\alpha = .90$ for women and .87 for men, while for the scale measuring masculine traits (the agency dimension) it was $\alpha = .76$ for women and .89 for men. These values indicate good to very good reliability of both subscales, which means that the items in each scale are consistent and measure the same construct. In order to compare the obtained solutions, consistency indices were calculated for corresponding dimensions (congruence coefficient, Table 2, p. 122).

Interpreting the congruence coefficient according to restrictive criteria (Lorenzo-Seva & ten Berge, 2006), we can assume that the corresponding dimensions of femininity and masculinity in both solutions are identical. Since the studies emphasize the relationship between the ratings and the gender of the respondents (Deaux & Kite, 2002; Smiler, 2004; Smiler & Epstein, 2010), it was

decided to check whether the gender of the respondents significantly affects the above results. Table 3 presents analyses of the consistency of solutions depending on the gender of the respondents.

Table 2

Tucker's Congruence Coefficient for Factor Solutions for the Assessment of the Average Woman and Man Traits

		Man	
		Femininity	Masculinity
Woman	Femininity	**.98**	–.04
	Masculinity	.01	**.97**

Note. Bold font indicates coefficients denoting identical dimensions.

Table 3

Congruence of the Femininity and Masculinity Factor Structures, Taking into Account the Gender of the Respondents and the Object

Men's ratings		**Women's ratings**			
		Typical woman		Typical man	
		Femininity	Masculinity	Femininity	Masculinity
Typical woman	Femininity	**.99**	–.06		
	Masculinity	–.07	**.98**		
Typical man	Femininity			.09	**.99**
	Masculinity			**.99**	.10

Note. Bold font indicates coefficients denoting identical dimensions.

The analyses aimed to determine whether the factor structure for the assessment of a typical woman and a typical man is equally consistent regardless of the gender of the assessor. To this end, an analysis was performed to compare the consistency of factor solutions in two groups (congruence coefficient). The analyses indicate that regardless of the gender of the people using the scales to describe women and men, the factor solutions can be considered identical.

Confirmatory Study

Referring to contemporary methodological postulates for measuring gender stereotypes (e.g., Smiler & Epstein, 2010), it was decided to conduct confirmatory analyses to examine the structure of relationships between multiple variables. For this purpose, data from two independent studies were used: a study on the impact of advertising on gender perception (Winiewski et al., 2008) and a study on the content of contemporary gender images and their significance for the self (Majcher, 2013). In both studies, the final version of the research tool for

measuring the content of gender stereotypes, consisting of 20 items, was used. The collected data allowed for factor analyses to be conducted in order to verify the assumed structure.

Study on the Impact of Advertising on Stereotypes – Winiewski et al. (2008)

Participants

The research participants were mainly students from the University of Warsaw, representing various fields of study. The research sample consisted of 241 people (139 women and 101 men), with an average age of M_{age} = 24.39 years (SD = 7.69). The selection of participants for the study was deliberate, and recruitment took place mainly during classes at the university, which ensured access to a relatively homogeneous group in terms of age, but diverse in terms of interests and worldview.

Procedure

The study analyzed the relationship between the role of the advertising character and the perception of gender stereotypes. The respondents completed a questionnaire containing 20 items, developed on the basis of earlier stages of the tool's construction. Their task was to assess how often each of the presented characteristics is used to describe women and men, using a scale from 1 (*very rarely used*) to 5 (*very often used*).

A Study of the Content of Modern Images of Typical Representatives of Gender – Majcher (2013)

Participants

The research participants were people with higher education and students, excluding those with a background in psychology. The sample consisted of 276 people (143 women and 133 men), with a mean age of M_{age} = 33.08 years (SD = 13.46). The selection of participants for the study was deliberate, the sample was convenient, and recruitment took place through various online channels (forums and interest groups) in order to obtain a diverse sample in terms of age and life experience.

Procedure

This study analyzed the content of contemporary gender images and their significance for the construction of the "I" identity in the context of gender stereotypes. As in the previous study, respondents rated 20 characteristics of the tool, indicating how often they are used to describe women and men on a scale from 1 (*very rarely used*) to 5 (*very often used*).

In both studies, the final 20-item version of the research tool was used to measure the content of gender stereotypes. The collected data allowed for factor analyses to be carried out to verify the assumed structure. The results are presented in Table 4.

Table 4

Results of Confirmatory Factor Analyses

Study	Object	*N*	χ^2	*df*	*p*	CFI	TLI	RMSEA
Majcher (2013)	Woman	276	160.01	146	.202	.992	.989	.019
	Man	276	183.87	146	.018	.983	.977	.031
Winiewski, Majcher, Drewnik (2008)	Woman	241	190.24	111	.008	.957	.944	.044
	Man	241	181.01	111	.048	.971	.963	.036

Note. All models take into account the covariance between latent variables.

The models take into account the covariance of latent variables. The results obtained indicate a high degree of model fit to the data, both for the assessed "typical" woman and the assessed "typical" man. In addition, internal consistency analyses show that in both studies, both the femininity and masculinity scales have high consistency regardless of whether a man or a woman is being assessed (Table 5).

Table 5

Internal Consistency of the Femininity and Masculinity Scales in Confirmatory Studies

		Object	
		Woman	Man
Majcher (2013)	Femininity	.89	.86
	Masculinity	.78	.83
Winiewski, Majcher, Drewnik (2008)	Femininity	.83	.86
	Masculinity	.75	.83

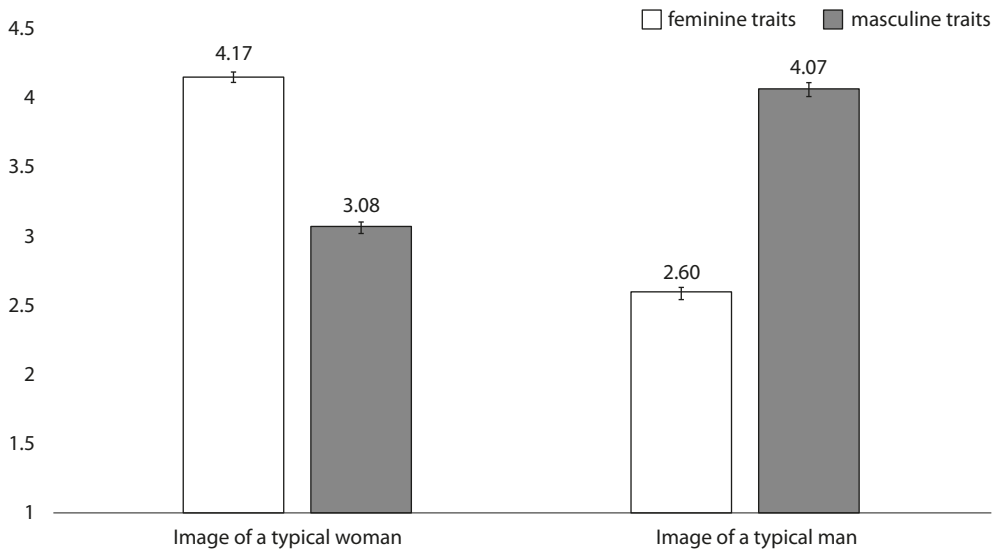
Validity – the Image of "Typical" Representatives of the Genders

The aforementioned studies also allow us to describe the content of the image of "typical" women and men, which allows us to determine the validity of the internal structure of the presented tool to some extent. In order to check the differences between the image of "typical" women and men, a two-factor analysis of variance was performed in a mixed design (2) (Gender of "typical" representatives) × 2 (Type of characteristics attributed to gender representatives), where

the type of characteristics attributed to gender representatives was the between-subject factor and the gender of "typical" representatives was the within-subject factor (see Figure 1).

Figure 1

Average Intensity of Feminine and Masculine Traits in Relation to the Image of a Typical Woman and a Typical Man



Note. Error bars represent the standard error of the mean.

The interaction effect between gender and trait type proved to be significant, $F(1, 241) = 916.10$, $p < .001$, $\eta p^2 = .79$. In order to determine the nature of the effect, a series of simple post hoc comparisons with Bonferroni correction were conducted, which showed that both in the image of a "typical" woman and in the image of a "typical" man, the intensity of gender-specific traits was higher. To determine the effect sizes, Cohen's standard difference d was calculated for each pair of comparisons. The results showed that the image of a "typical" woman had higher intensities of feminine traits than the image of a "typical" man ($d = 2.00$), which is a very strong effect, while the image of a "typical" man had higher intensities of masculine traits than the image of a "typical" woman ($d = –1.79$), which is also a very strong effect. Comparisons between corresponding dimensions between the images of "typical" women and men show that in terms of specific traits – the degree of feminine traits attributed to a "typical" woman ($M = 4.17$) is significantly higher than the degree of masculine traits attributed to a "typical" man ($M = 4.07$), but this difference is marginal ($d = 0.18$). When comparing non-specific traits, it turns out that the degree of masculine traits attributed to a "typical" woman ($M = 3.08$) is significantly higher than the degree of feminine traits attributed to a "typical" man ($M = 2.60$), and the effect size is medium ($d = 0.74$).

The results obtained thus indicate significantly different proportions of specific and non-specific traits in the images of a "typical" woman and a "typical" man. The image of a "typical" woman is characterized by a high intensity of feminine traits and a significantly lower intensity of masculine traits. The image of a "typical" man is characterized by a high intensity of masculine traits and a significantly lower intensity of feminine traits. These results verified the theoretical accuracy of the tool.

Discussion

The study described above focused on analyzing contemporary gender stereotypes and their cognitive structure. In accordance with contemporary methodological standards, factor analysis was used, which allowed us to identify a stable, two-dimensional structure of these stereotypes. Based on a wide selection of characteristics—descriptors—considered to accurately describe typical representatives of each gender, a tool was created whose two-factor, relatively orthogonal structure refers to both the concept of gender roles and psychological gender (Bem, 1974; Eagly, 1987).

The reliability and validity of the developed research tool were assessed, which showed compliance with the theoretical assumptions concerning the two-dimensional model of social perception. Our results, especially those concerning the significantly different proportions of specific and non-specific traits in the images of a "typical" woman and a "typical" man, confirm the continuing polarization of gender stereotypes. The high intensity of feminine traits in the image of a "typical" woman and masculine traits in the image of a 'typical' man is consistent with the cross-cultural universal attribution of communality to women and agency to men.

Interestingly, it has been observed that the degree of feminine traits attributed to a "typical" woman is significantly higher than the degree of masculine traits attributed to a "typical" man, although the difference is marginal. The difference was more significant in the case of non-specific traits, where the degree of masculine traits attributed to a "typical" woman is significantly higher than the degree of feminine traits attributed to a "typical" man, and the strength of the effect is moderate. These results may suggest that the image of women, despite the dominance of communal traits, integrates traditionally masculine (agentive) traits to a greater extent than the image of men integrates feminine traits (communal). This is consistent with trends observed in the literature, where stereotypes about women's agency have intensified in recent decades, while stereotypical perceptions of men's agency have shown a slight decline. This may reflect the growing involvement of women in areas traditionally considered masculine, while maintaining their role in caring spheres.

In the context of the slow changes in gender stereotypes, especially those concerning masculinity, our study provides up-to-date data for the Polish context. According to the precarious manhood theory, masculine status is constantly

acquired and maintained through the fulfillment of cultural norms, which may explain the relative stability of male stereotypes compared to female ones. These results emphasize the dynamics and contextuality of gender stereotypes, as well as the need for regular research on their content.

The study is, of course, not without limitations. First of all, it was conducted among students and people with higher education, and women slightly outnumbered men in the sample, which limits our ability to generalize the results to the entire population. In the future, it would be worth considering replicating the study on a more diverse demographic sample in order to obtain a more complete picture of contemporary gender stereotypes in Poland. The tool is also specifically tailored to the Polish context, so its potential use in other cultures would require further validation. Further research could also focus on analyzing differences in the perception of gender stereotypes depending on age, region, or other socio-cultural variables.

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