

# Dimensions of Mentoring Among Female Managers – an Explanatory Factor Analysis Based on the Global Measure of Mentoring Practices

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## Abstract

**Purpose:** The objective of the article is to identify the dimensions of mentoring experienced by female managers. The recognition of the mentoring dimensions serves a significant role in enhancing the understanding of the support received by the mentee and facilitating an accurate evaluation of mentoring within the managerial context, especially in the Polish socio-economic conditions.

**Design/methodology/approach:** The paper presents the results of an exploratory factor analysis based on data, acquired through an online questionnaire, from 370 female managers at basic, middle and senior levels of management. 18 items Global Measure of Mentoring Practices were used to examine the extent of mentoring actions experienced by female managers.

**Findings:** The study discovered that mentoring female managers can be analyzed in three dimensions. Psychosocial, cognitive and patronage mentoring were distinguished. All mentor activities indicated in the questionnaire were included and allocated to the relevant dimensions of mentoring.

**Practical implication:** The study offers several recommendations based on the results of the research that address the diagnosis of mentoring, which is important in the process of evaluating the mentoring relationship and assessing its effectiveness.

**Originality/value:** The current research provides novel insights about the mentoring relationship among managerial staff. The mentoring support received by managers can be analyzed in three dimensions, related to the various activities undertaken by the mentor.

**Keywords:** mentor, female managers, mentee, mentoring dimensions, development.

**JEL:** J53, M12

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## Wymiary doświadczanego przez menedżerki mentoringu – analiza czynnikowa Global Measure of Mentoring Practices

### Streszczenie

**Cel:** celem artykułu jest identyfikacja wymiarów mentoringu doświadczanego przez menedżerki. Rozpoznanie wymiarów mentoringu odgrywa istotną rolę w lepszym zrozumieniu wsparcia otrzymywanego przez podopiecznych i ułatwia trafną ocenę mentoringu w kontekście menedżerskim, szczególnie w polskich warunkach społeczno-ekonomicznych.

**Projekt/metodologia/podejście:** w artykule przedstawiono wyniki eksploracyjnej analizy czynnikowej opartej na danych uzyskanych za pomocą kwestionariusza ankiety. Dane pozyskano od 370 menedżerek podstawowego, średniego i wysokiego szczebla zarządzania. Do zbadania zakresu działań mentoringowych doświadczanych przez nie wykorzystano kwestionariusz Global Measure of Mentorship Practices (GMMP) składający się z 18 pozycji.

**Wnioski:** badanie wykazało, że mentoring doświadczany przez menedżerki może być analizowany w trzech wymiarach: psychospołecznym, poznawczym i patronackim. Wszystkie działania mentora wskazane w kwestionariuszu zostały uwzględnione i przypisane do odpowiednich wymiarów mentoringu.

**Praktyczne implikacje:** badanie oferuje kilka rekomendacji, które odnoszą się do diagnozy mentoringu, co stanowi istotną rolę w procesie ewaluacji relacji mentorskiej i oceny jej skuteczności.

**Oryginalność/wartość:** badania dostarczają nowych spostrzeżeń na temat relacji mentorskiej wśród kadry kierowniczej. Badania wykazały, iż wsparcie mentorskie otrzymywane przez menedżerów można analizować w trzech wymiarach, związanych z różnymi działaniami podejmowanymi przez mentora.

**Słowa kluczowe:** mentor, menedżerki, podopieczne, wymiary mentoringu, rozwój.

## 1. Introduction

The evolution of the economy in which modern organizations operate has influenced the reconfiguration of key factors for the competition and the success achieved by companies. A crucial element of an organization's strategy is knowledge and the ability to both acquire information and select it effectively (Switzer, 2008; Vrabcová et al., 2022). The need to invest in intellectual capital has stimulated the development of new methods of knowledge management, whose role is to transfer and create new resources at organizational, team and individual levels (Cabrilo & Dahms, 2020). One of them is mentoring, which aims at improve employees' competences and build a culture of organizational learning.

Over the last few decades, mentoring has been gaining importance in the context of Polish organizations. Employers appreciate mentoring as a talent management tool and as an element of personnel policy. Polish entrepreneurs in 2020 (Czarnik, 2021) indicated in the top three most frequently used methods of employee competence development: instruction (57%), coaching and mentoring (50%) and job shadowing (49%).

The contemporary business reality faced by employees, especially those in managerial roles, entails a number of challenges. In many cases, it is mentoring that is being used as a key tool for leadership development, increasing

opportunities for promotion or acquiring new competencies, both technical and social (French & Eskridge, 2020; Gisbert-Trejo et al., 2023). Maxwell (2009) highlights that it can have a particularly beneficial impact on women's management careers. It seems especially relevant given the still observed scarcity of women at the highest levels of management (Fernandez-Mateo & Fernandez, 2016; Ciappei et al., 2023). The IBM (van Kralingen et al., 2021) report exposes mentoring as an example of a strategy to support women leaders in the professional space, with the potential for breakthrough benefits and financial profit for organizations.

Currently, much of the mentoring research in the literature has focused on identifying effects of supportive mentoring relationships. Researchers relatively often decide on purposive sampling, targeting research questionnaires to participants in mentoring programs (Lester et al., 2011). Therefore, the step of operationalizing the mentoring experienced and thus analyzing an individual mentor's actions, the type of support provided and the dimensions of mentoring is often omitted. Moreover, on the basis of the literature review, a scarcity of research was observed, in the field of mentoring for executives, particularly female executives. Furthermore, no studies were found in which mentoring was operationalized on the basis of a comprehensive analysis of individual actions taken by the mentor towards managers. Consequently, the dimensions and types of support that managers experience as a result of cooperating with a mentor have not yet been recognized.

In view of the above premises, the following research question was posed: What dimensions of mentoring experienced by female managers can be distinguished? The aim of the study is therefore to identify the dimensions of mentoring experienced by women in basic, middle and senior management positions. The formulated research objective was achieved by means of a quantitative survey of 370 female managers from organizations across Poland, using the relatively popular translated Global Measure of Mentoring Practices questionnaire (Dreher & Ash, 1990). The collected data was subjected to statistical analysis, consisting of the identification of latent variables, i.e. dimensions of experienced mentoring, measured through observed diagnostic variables.

## 2. Literature Review

### 2.1. Specificity of Mentoring

For many years, mentoring has been a common practice used in the business space, oriented towards talent development, onboarding of newly hired employees and the support of managers (Ślęzak-Gładzik, 2016). Mentoring is an example of an interpersonal relationship between a more experienced person, called a mentor, and a mentee, i.e. a person striving to develop knowledge, skills and, consequently, their career path (Megginson & Clutterbuck, 1995; Moake et al.,

2023). The relevant advantage of mentoring is highly individualized and tailored to the needs of the mentee, educational process (Lin et al., 2021). The mentoring relationship can be initiated by the mentee as well as taking on an institutional character in the form of development programs implemented in the organization. Popularity of mentoring resulted from the wide range of benefits derived from the mentoring relationship (Arruti, 2021). The effects apply to both the organization and the individual, both objectively and subjectively (Allen et al., 2004).

The subtle differences in the way mentoring is conceptualized by researchers stem from the economic and social context accompanying the relationship, the transformation of the business environment and the needs of the parties involved. Nevertheless, it is possible to distinguish some consistent attributes of mentoring that frame it (Eby et al., 2007). First of all, it should be emphasized that mentoring is a voluntary and partnership relationship oriented towards competence acquisition and development. The relationship between mentor and protégé is characterized by reciprocity and therefore both mentor and mentee benefit from it. For this reason, Pandey and Chhaila (2014) refer to mentoring as a win-win relationship.

Despite the mutual benefits, the most significant beneficiary of the relationship is the mentee, as a result of the asymmetry of the relationship in terms of the extent of knowledge and experience of the mentor, as compared to the mentee. Furthermore, mentoring is not only about the transfer of knowledge, but also the creation of its new resources (Stankiewicz et al., 2018), e.g. as a result of discussions and experiments undertaken. Jyoti and Rani (2019) refer to the mentor as an intellectual partner and catalyst for new solutions. It is supported by the research of Liu, Wang and Wayne (2015), they indicate that mentoring positively influences the creative potential of the mentee.

An interesting view of mentoring, referring to its social character, was presented by Allen and Poteet (2011). They indicated that it is a series of episodes and interactions between the parties involved in the relationship. Fletcher and Ragins (2007) called mentoring a mutually reinforcing growth interaction. Sidor-Rzǎdkowska (2014) defined mentoring as a process of realizing goals derived from the mentee's dreams. Therefore, it can be concluded that mentoring consists of support in the process of setting developmental goals and subsequent systematic action to achieve them. However, it is worth noting that the mentor does not offer complete solutions to the mentee, but only inspires and leads the learning process (Bakiera, 2016). Moreover, the mentor's goal is to make the mentee self-reliant and increase the level of their independence (Oleksyn, 2011).

## **2.2. Types of Mentoring**

The foundation of traditional mentoring, which corresponds to hierarchical mentoring, is the age difference between a mentor and a mentee. The prerequisite for the mentoring role is the range of experience, which is a result of seniority and age. The evolution of mentoring and changes in both the labor market

and business have influenced amendment of mentoring relationships. The transformations concern the nature of the relationship, the activities undertaken by the mentor and the roles performed within the involved parties. Reverse mentoring is opposed to traditional hierarchical mentoring, it has emerged in response to increasing digitalization and the development of new technologies. In this type of relationship, the mentor is a younger person, often with less seniority than the mentee (Gadomska-Lila, 2020). Peer mentoring is another example, it is a developmental relationship between individuals at the same organizational level (Holbeche, 1996; Elliott et al., 2020).

An important criterion for diversifying mentoring relationships is their level of formalization (Eby & Lockwood, 2005). In formal mentoring, in addition to the mentor and mentee, an important role is played by the program coordinator, who is responsible for setting the rules, the purpose of the program, as well as the selection of mentoring pairs (Deng et al., 2022). Informal mentoring, on the other hand, is initiated by the mentor or mentee. This selection is the consequence of a natural fit between the development needs and the resources available to the mentor. Many studies show that informal mentoring relationships are more effective and beneficial from the perspective of the mentee's career development than formal relationships (Ragins & Cotton, 1999; Wanberg et al., 2003).

Mentoring is also differentiated according to the type of support and the action taken by the mentor towards the mentee. Kram (1983) as a result of the conducted analyses distinguishes between career and psychosocial mentoring. The mentor's activities within the scope of career mentoring focus on the mentee's career development and support in the process of reaching subsequent levels in the organizational structure (Wanberg et al., 2003). Examples of initiatives taken by the mentor include assigning challenging tasks, assisting with ongoing projects, recommending a protégé, providing training and guidance. Psychosocial mentoring, on the other hand, is oriented towards building a sense of agency, developing the protégé's self-awareness and professional identity. Therefore, psychosocial mentoring requires mutual trust, openness and understanding (Eby & Robertson, 2020). In psychosocial mentoring, the mentor provides support by showing respect, acceptance, sharing the own career story and encouraging change and new activities (Lankau & Scandura, 2002).

### **2.3. Mentoring for Managers**

Numerous benefits of mentoring for managers are highlighted in the literature (Arye & Chaye, 1994), which leads to a deeper analysis of the support received by the mentee. A managerial career is strongly linked to traditional development, which is reflected in vertical career advancement. Mentoring can therefore serve to prepare a manager to reach the next stage of advancement in their career path (Chauhan & Mishra, 2021). In such a situation, an important action of the mentor is to provide support through conversations and provide feedback to the mentee, which enables adapting to the new role and to make small adjustments to the actions taken in order to increase their effectiveness (Bauer et al., 2007).

Consequently, the mentor can significantly improve the mentee's functioning in the new role at a higher organizational level.

Cambell (1997) emphasized that mentoring managers is particularly focused around the management functions performed by the mentee and the broadening of the manager's horizons. The mentor is a valuable source of information for the mentee, not only because of extensive experience, but also because of mentor's greater access to business information. For this reason the mentor's role is to familiarize and explain to the protégé the goals of the organization and its internal and external policies (Allen et al., 1999).

One of the key factors of manager's success is social capital. As part of the development of the mentoring relationship, the mentor introduces the manager to the new community, and intensifies their contacts with the top management (Michel, 2007; Linehan & Scullion, 2008). In addition, the mentor also indicates behavioral norms appropriate to the new role by serving as a role model.

As indicated by Maxwell (2009), female managers' expectations of mentoring focus on the opportunity to work with a successful person, to be able to receive guidance and role model from them. Female managers' motivation for entering into a mentoring relationship is to gain broader business knowledge, new skills and increase their self-confidence. From the perspective of proper managerial functioning, psychological and mental support, including enhancing self-esteem and self-efficacy, is highly important (Saks & Ashforth, 1997).

#### **2.4. Measures of Mentoring**

In the research presented in the literature, a twofold approach to measuring and evaluating mentoring can be distinguished. Many researchers analyze only the fact of the experience of mentoring support. A dichotomous operationalization of mentoring consists of distinguishing between a group that experienced a mentoring relationship and one that did not cooperate with a mentor (Corallesi & Bishop, 1990; Baran & Zarzycki, 2021). To a certain extent, this approach enables the exploration of general regularities and relations associated with mentoring. However, such a significant generalization contained within it prevents an insightful assessment of the studied phenomenon.

The second approach is to evaluate mentoring by means of diagnostic variables related to the actions taken by the mentor. One of the first proposals to measure mentoring by diagnostic variable is the 32 items scale developed by Noe (1988). The variables indicated by the author make it possible to assess the extent to which the protégé has experienced career and psychosocial support. They were constructed on the basis of the functions performed by the mentor identified by Kram (1985).

Whitely, Dougherty and Dreher (1991) presented Career Mentoring Practices containing 10 statements by which respondents rated the extent to which they experienced particular mentor activities. It should be emphasized that the researchers focused only on career mentoring activities. Moreover, they did not use the term mentor. They replaced it with a direct supervisor or a person in a higher position.

Based on the two scales mentioned above, Dreher and Ash (1990) developed the Global Measure of Mentoring Practices. The scale consists of 18 items referring to both career and psychosocial support received by the mentee. The questionnaire proposed by Dreher and Ash has become relatively popular and has been used in many studies concerning mentoring (Chauvin & Ash, 1994; Nurita et al., 2015; Jyoti et al., 2022).

Scandura and Ragins (1993) proposed the Mentoring Functions Questionnaire Scale (MFQ-15) consisting of fifteen diagnostic variables, which the authors grouped into three dimensions: psychosocial support, career development and role modelling. In 2004, Castro, Scandura and Williams, following their analyses, reduced the questionnaire to nine items, thus developing the MFQ-9.

It is also worth mentioning the tool constructed by St-Jean (2011). Based on interviews, discussion groups and expert consultations, the researcher developed a Mentoring Function Scale for Entrepreneurs. The questionnaire items referred to psychosocial mentoring, career mentoring, and role modelling. In psychosocial mentoring, the following mentor functions were distinguished: reflection, reassurance, motivation and confidence. Career mentoring consisted of an integration function, information support function, confrontation function and guide function. In total, the questionnaire consisted of 35 items.

One of the most recent tools is the Mentoring Support Scale (Nuis et al. 2023) consisting of 35 items. The exploratory factor analysis carried out identified six factors: trust and availability, emotional support, networking support, autonomy support, similarity, empathy. It should be added, however, that the Mentoring Support Scale was prepared in the context of examining the experience of mentoring support by students from a University in Belgium and the Netherlands.

Nevertheless, the conducted literature review reveals scarcity of research in the field of mentoring among managerial staff. Moreover, a measurement tool of experienced mentoring fully dedicated to managers has not been found. Hunt and Michael (1983) emphasized that the context of the mentoring relationship in the form of the country's level of socio-economic development and the professional roles performed by the mentee, significantly affect the nature and specificity of the mentoring relationship. For this reason, taking into account the particularistic aspects of mentoring seems reasonable and extremely necessary in a reliable research process.

### 3. Research Methodology

The aim of the study is to identify the dimensions of mentoring experienced by female managers. The research was conducted by CAWI method. The survey questionnaire used the Global Measure of Mentoring Practices (GMMP), containing 18 items (Dreher & Ash, 1990). Originally, GMMP developers classified 8 variables as career mentoring and 10 as psychosocial mentoring. All items were translated using the back-translation method using a professional translation agency. Individual items referred to the actions the mentor undertakes towards

the mentee. Respondents rated on a seven-point Likert scale the extent/frequency to which they experience each mentor's actions. The questionnaire also included questions about the characteristics of the respondents, such as age, seniority, size of the company where they are employed, and management level.

The research group included female managers who have experienced mentoring. The request to complete the questionnaire was addressed directly to female managers who cooperated with a mentor, as well as to organizations coordinating mentoring programs and companies throughout Poland with a request to distribute the questionnaire to female managers. Thus, the research sample selection was random with restriction and therefore within the population of female managers who experienced mentoring support. Data through an online survey was collected in the first half of 2022. Ultimately, 370 correctly completed questionnaires were received.

Characteristics of the respondents are presented in Table 1. 36% of the female managers surveyed are between 30 and 40 years old, while 46% are 41–50 years old. A significant part of the female respondents (67%) have more than 15 years of work experience. More than half (57%) work in large companies with more than 250 employees. 54% of female managers hold top management positions, while 37% are middle management managers.

Based on the collected data, an exploratory factor analysis was conducted using the IBM SPSS statistical package, version 27. Factor analysis is a relatively common statistical procedure used in social science research (Górniak, 1998). It is a data reduction technique involving the establishment of underlying relationships between variables. It allows the identification of latent variables that are combinations of observed variables (Crawford & Lomas, 1980). It should be noted that the estimated variables, or principal components, also called factors, retain a relatively large part of the information contained in the individual diagnostic variables. The reduction of variables not only increases the ease of interpretation of the phenomenon and the relationships associated with it, but also makes it possible to isolate its characteristic dimensions in the analyzed context research.

An exploratory factor analysis with oblimin rotation was used to examine the dimensions of mentoring experienced by female managers, as it was assumed that the factors would be interrelated (Pallant, 2010). To verify the relationship between factors, Pearson's linear correlation analysis was used. (Ferguson & Takane, 2009). Conversely, the reliability and consistency of the questionnaire and its modules corresponding to the highlighted factors were verified using alpha reliability coefficients. (Leontitsis & Pagge, 2007)

First, the validity of the factor analysis was checked using Bartlett's Sphericity Test and the Kaiser-Meyer-Olkin Test of Sampling Adequacy (KMO). It was shown that Bartlett's Sphericity Test to evaluate the factor structure of the analyzed construct is statistically significant ( $Chi^2 = 3444.55$ ;  $df = 153$ ;  $p < 0.01$ ). Moreover, the KMO coefficient value is 0.897, which therefore justifies the reduction of variables for the analysed sample.



Table 1  
*Characteristics of the research group*

Variable		Number	% of respondents
Age	less than 30 years old	22	6
	30–40 years	140	38
	41–50 years	170	46
	over 51 years	38	10
Seniority	up to 5 years	9	2
	5–10 years	42	11
	10–15 years	72	19
	15–20 years	111	30
	over 20 years	136	37
Size of the company (number of employees)	less than 10 employees	47	13
	11–50 employees	55	15
	51–250 employees	57	15
	over 250 employees	211	57
Level of management	low	31	8
	middle	138	37
	top	201	54

The next step in the exploratory factor analysis was to determine the number of factors to retain. The Kaiser criterion, the criterion of sufficient proportion and the scree plot were used. According to the Kaiser criterion, factors should be retained if their eigenvalues are greater than or equal to one. According to the criterion, it seems reasonable to adopt a three-dimensional solution (Table 2). In the study sample, the total percentage of explained variance by the first three components was 60.1%, which can be considered a satisfactory result. The first component explains 37.4% of the total variance in mentoring experienced by female managers, the second component 16.1%, and the third component 6.6%.

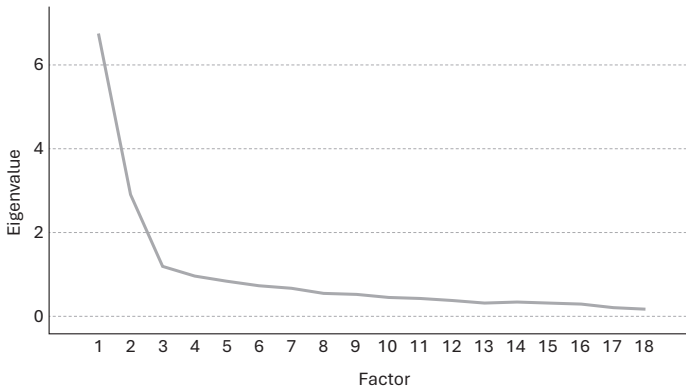
Additional confirmation of the adoption of the three-factor solution is provided by the scree plot. The graph presented in Figure 1 shows the line connecting the eigenvalues of individual factors. For three factors, the scree plot cutoff can be observed. This means that adding more components (factors) does not significantly improve the explanation of the total variation.

Table 2  
*Total Variance Explained*

Item	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	6.725	37.362	37.362
2	2.899	16.104	53.466
3	1.191	6.619	60.085
4	0.961	5.338	65.423
5	0.824	4.575	69.998
6	0.725	4.028	74.026
7	0.671	3.727	77.754
8	0.563	3.129	80.882
9	0.523	2.904	83.786
10	0.458	2.545	86.331
11	0.430	2.387	88.718
12	0.372	2.066	90.784
13	0.339	1.884	92.669
14	0.329	1.830	94.499
15	0.306	1.700	96.199
16	0.287	1.594	97.793
17	0.216	1.197	98.990
18	0.182	1.010	100.000

On the basis of the results obtained, it can be inferred that the mentoring experienced by female managers comprises three dimensions. Consequently, the actions taken by the mentor to support female managers' development can be analyzed in three areas.

Figure 1  
Scree plot



## 4. Research Results

Exploratory factor analysis enabled the verification of the factor loadings of each diagnostic variable (Table 3). Consequently, diagnosing the specificity of each of the three identified dimensions of mentoring. The factor loading represents the correlations of a diagnostic variable with a given component, i.e. factor 1, factor 2, and factor 3. Howard (2016) recommended that satisfactory variables load onto their primary factor above 0.40 and load onto alternative factors below 0.30. On the other hand, Hair, Anderson, Tatham and Black (1998) emphasized that factor loading greater than 0.5 is practically significant. Therefore, a value of 0.5 was taken as the cut-off value.

The first component contains 11 variables that relate to conversations undertaken, showing respect, understanding, sharing experience and career history, encouraging change and advancement, serving as a role model, and providing support in career development. The second component refers to the mentor's activities of assigning tasks to the mentee, as well as fulfilling the information function. The third component is most strongly related to the mentor's protective function and the mentor's assistance in tasks undertaken by the mentee.

The mentoring experienced by female managers, measured by Global Measure of Mentoring Practices, consists of three dimensions. On the basis of the activities undertaken by the mentor highlighted in the individual factors and the analysis of the existing literature (Gail Lunsford, 2014; Baran, 2016; Waaland, 2021), the author named them: psychosocial, cognitive and patronage mentoring. The mentor's activities in factor one, psychosocial mentoring, are focused on building high quality interpersonal relationships and also providing support and building the mentee's self-esteem. Factor two, covers the mentor's activities whose main aim is the professional development of the mentee. The implementation of complex

Table 3

*Factor Loadings of the Global Measure of Mentoring Practices Items*

Diagnostic variables of experienced mentoring	Factor		
	1	2	3
Encouraging conversations about work-related fears and anxieties	<b>0.815</b>	0.156	0.091
Conveying feelings of respect	<b>0.789</b>	0.150	0.017
Initiating conversations about the sense of responsibility	<b>0.769</b>	0.142	0.268
Sharing personal experience	<b>0.766</b>	0.242	0.208
Encouraging change	<b>0.759</b>	0.169	0.219
Conveying feelings of respect	<b>0.756</b>	0.224	-0.125
Serving as a role model	<b>0.700</b>	0.459	0.119
Supporting career development and professional interests	<b>0.681</b>	0.350	0.315
Representing attitude and values similar to the mentee's	<b>0.650</b>	0.307	-0.019
Encouraging career advancement	<b>0.631</b>	0.309	0.351
Sharing own career history	<b>0.587</b>	0.161	0.351
Recommending tasks that require collaboration with other managers	0.216	<b>0.895</b>	0.190
Recommending tasks that intensify contact with senior management	0.246	<b>0.876</b>	0.220
Recommending challenging tasks	0.259	<b>0.829</b>	0.193
Recommending tasks that allow to get to know new colleagues	0.197	<b>0.820</b>	0.366
Providing information about the functioning of the organization	0.345	<b>0.613</b>	0.319
Protecting against factors that negatively affect career development	0.177	0.356	<b>0.798</b>
Helping with professional tasks	0.240	0.303	<b>0.749</b>
Factor extraction method – Principal components Analysis. Rotation method – Oblimin with Kaiser normalization.			

tasks in the professional space, which additionally require cooperation and the combination of various data, develops the mentee's cognitive functions such as attentiveness, memory, logical thinking, communication. For this reason, the factor has been referred to as cognitive mentoring. In the third factor, a protective and supportive function was identified, prompting the designation of the phenomenon as patronage mentoring.

Pearson's linear correlation coefficients were calculated for the indicated dimensions, which are presented in Table 4. All factors have a positive relationship, meaning that an increase in the experience of one dimension of mentoring is accompanied by an increase in the other. The strongest relationship is between patronage mentoring and cognitive mentoring. A slightly weaker relationship is found between cognitive mentoring and psychosocial mentoring. In contrast, the smallest value of Pearson correlation coefficient exists between patronage mentoring and psychosocial mentoring.

Table 4  
Correlation matrix between factors of experienced mentoring

Factors	Factor 1: Psychosocial mentoring	Factor 2: Cognitive Mentoring	Factor 3: Patronage Mentoring
Factor 1: Psychosocial mentoring	1	0.344**	0.280**
Factor 2: Cognitive mentoring	0.344**	1	0.414**
Factor 3: Patronage mentoring	0.280**	0.414**	1

\*\*  $p < 0,001$

Using Cronbach's Alpha coefficient, the internal consistency of both the full 18-items questionnaire and the individual factors estimated using the exploratory factor analysis was checked (Table 5). According to the classification proposed by George and Mallery (2016) an index value above 0.7 indicates acceptable internal consistency of the scale. The value of the index of the full Global Measure of Mentoring Practices questionnaire is high (0.894), which indicates a high level of reliability of the tool.

It is worth noting that the first factor, psychosocial mentoring, has the highest consistency (0.905). The lowest coefficient value is recorded for the third factor (0.616) involving only two diagnostic variables. At this point, however, it should be emphasized that the Pearson linear correlation analysis of all diagnostic variables showed that the *Protecting against factors that negatively affect career development* variable obtained the highest Pearson linear correlation coefficient with the *Helping with professional tasks* variable (0.446,  $p < 0.001$ ). The correlation coefficients of the two mentioned variables with the other diagnostic variables included in factor one and factor two were much lower.

Table 5  
*Reliability of measurement tools*

<b>Mentoring</b>	<b>Cronbach's Alpha coefficient</b>
Total Mentoring (18-items GMMP)	0.894
Factor 1: Psychosocial mentoring (11 items)	0.905
Factor 2: Cognitive mentoring (5 items)	0.869
Factor 3: Patronage mentoring (2 items)	0.616

Analysis of the respondents' answers showed that the question regarding the protective function realized by the mentor may not have been fully understood. 24% of female mentors responded that it was difficult for them to assess whether the mentor protected them from factors negatively affecting career development. Therefore, the overly general and vague wording of the question may have indirectly contributed to the low value of the Cronbach's alpha coefficient of the third factor.

## 5. Conclusion and Discussion

Mentoring, both in business practice and in the literature, is evaluated as a beneficial method of supporting the development of managers' competencies (Gentry et al., 2008) and, consequently, their professional careers (Dashper, 2019). Therefore, it seems important to analyze both the individual support actions that a mentor performs and the dimensions of mentoring experienced by managers. This can provide a starting point for the development of high-quality mentoring relationships (Sloan et al., 2020) and support for mentors in the form of dedicated supervision and training.

According to Ragins and McFarlin (1990), one of the many obstacles to the reliable measurement of experienced mentoring is the lack of a thorough measurement tool. A significant step forward was the Mentoring Function Scale developed by Noe (1988). Nevertheless, the exploratory factor analysis conducted by the researcher revealed the conceptual ambiguity of the instrument. One-third of the 32 variables used by the researcher failed to significantly load on either the career development or psychosocial factor. In subsequent years, despite the development of new measurement tools, a significant portion of them was based on the mentor activities and functions originally distinguished by Kram (1983). Consequently, researchers often made only subtle changes to individual questionnaire items.

The research extends the current literature on mentoring specifically among female managers. It is shown that mentoring experienced by female managers can be conceptualized and expressed in three dimensions. It is of particular interest because it is not fully consistent with the classification of the variables of

experienced mentoring made by the previous researcher. Developers of the Global Measure of Mentoring Practices (Dreher & Ash, 1990) identified only two dimensions of experienced mentoring (career mentoring and psychosocial mentoring). It should also be mentioned that the analysis conducted did not confirm the three-factor solution proposed by Scandura (1992). The researcher highlighted role modeling as the third dimension of mentoring, separating it from psychosocial mentoring.

In addition to differences in the number of dimensions of mentoring, some discrepancy has been shown in the allocation of mentor actions to the type of support received by mentee. According to Dreher and Ash (1990), the *Supporting career development and professional interests* variable is one of eight variables associated with career mentoring. An exploratory factor analysis based on data on mentoring experienced by female managers showed that it is a component of factor one, thus correlating with variables describing psychosocial mentoring.

In the Mentor Role Scale (Ragins & McFarlin 1990), the *Mentor suggests specific strategies for achieving career aspirations, gives me advice on how to attain recognition in the organization, helps me learn about other parts of the organization* variable was included in the coaching subscale for career mentoring. On the other hand, in a factor analysis conducted by Noe (1988), the *Mentor suggested specific strategies for achieving your career goals* variable received the same load value for both career and psychosocial mentoring. Therefore, certain disparities are noticeable both in the way career development-supporting actions are framed and in their classification within a given dimension of mentoring.

Another major difference from the existing literature is the third factor, which is patronage mentoring. The dimension of mentoring includes two mentor functions classified by Dreher and Ash (1990) as career mentoring. They are: *Protecting against factors that negatively affect career development* and *Helping with professional tasks*. In a factor analysis conducted by Noe (1988), the mentor's action of providing assistance was classified as career mentoring. Tenenbaum, Crosby and Gliner (2001) assigned the variables *Helped you finish assignments/tasks or meet deadlines* and *Protected you from working with other faculty, lecturers, or staff before you knew about their likes/dislikes, opinions on controversial topics, and the nature of the political environment?* to instrumental mentoring support. It should be added that the research was conducted among University of California graduates. The academic context of the mentoring relationship (Nuis et al., 2023) differs from the development conditions of employees performing managerial functions in the organization. Managers, as protégés of the mentoring relationship, may require an altered type or intensity of support, and thus the dimensions of the mentoring experienced may assume a different character.

In addition, it is worth noting in the factor analysis conducted by Fowler and O'Gorman (2005), that the protection function did not receive a minimum load value, that is, it was not classified in any of the dimensions of mentoring. The authors stress that it may be due to the specific environment in which the research was conducted (the research group included employees of six organizations between the ages of 22 and 52). Cordes and Gibson (1996) point out that being

protected is negatively related to salary, promotion or subjectively assessed professional success. On the basis, the sensitivity of individual diagnostic variables to the research context can be observed, along with the group of respondents and the environment in which they experience a supportive relationship.

The wide range of functions performed by the mentor and the intensity of the support provided affect the quality of the mentoring relationship (Sloan et al., 2020). However, bearing in mind the considerations presented, it should be emphasized that the type of individual support actions depends on the environment in which the mentee functions and, consequently, mentee' development priorities (Mullen & Klimaitis, 2019). Mentor activities that are beneficial in an academic environment may not necessarily determine positive results for mentees functioning in a business environment, especially executives. As indicated by the research, the mentoring experienced by female managers may assume slightly different dimensions than those indicated in the literature from the experiences of students, graduates, or operational staff.

In summary, on the basis of the exploratory factor analysis conducted, the author identified three dimensions of mentoring experienced by female managers. The first is psychosocial mentoring, which is the most numerous dimension of mentoring in terms of support activities. It concerns both building an interpersonal relationship based on respect, empathy, conversation, encouraging courageous steps, serving as a role model, and supporting the mentee in a challenging developmental journey. The second dimension of mentoring experienced by female managers is cognitive mentoring, which involves inspiring, and motivating the mentee to take on difficult tasks by engaging the mentee in challenging projects. The purpose of the activities is to develop the manager's cognitive skills such as critical thinking, decision-making and problem-solving. The information provided by the mentor also plays an important role in this process, allowing the mentee to see new perspectives on observed phenomena. The third dimension is patronage mentoring, where the mentor takes on the role of guardian and patron, protecting the mentee from negative comments or situations that hinder career development and helping mentee with tasks and projects.

## 6. Limitation and Future Research Direction

The mentoring relationship has some distinctive attributes and characteristics, setting the framework for the interaction between mentor and mentee. However, the type of support provided is adjusted to the nature of the mentee's professional work, the individual's potential and competence capital. Important objectives of mentoring intended for managers are to build the autonomy and independence of the individual, networking, and to develop the ability to delegate or lead.

In order to verify whether the relationships and dimensions of experienced mentoring indicated in the article are gender-independent, it would be important



to conduct a study involving male managers in leadership roles. A comparison of experienced support and dimensions of mentoring between female and male managers could be interesting.

As a direction for future research, it can be recommended to develop a scale to assess experienced mentoring support among managers. The outcome of the factor analysis conducted can be used as a starting point. First of all, attention should be paid to clarifying the three diagnostic variables.

As the mentor's activity of supporting the mentee's career development is characterized by a high degree of generality, it would be advisable to make it more specific. It would also be useful to analyze the activities included in patronage mentoring related to the protection of the mentee and the assistance provided to them.

A desirable direction for research to precisely diagnose mentoring relationships for managers would be to conduct in-depth interviews with mentors and mentees. Qualitative research could provide important insights into the effectiveness of individual mentor actions and the nature of the mentor-manager relationship.

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*The authors used the AI tool ChatGPT to help check grammar (only) in the preparation of this article.*

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