Article

Multidimensional Prayer Inventory: Psychometric Properties and Clinical Applications

Beata Zarzycka [1] , Dariusz Krok [2] , Kamil Tomaka [1,*] and Radosław Rybarski [1]

[1] Institute of Psychology, John Paul II Catholic University of Lublin, 20-950 Lublin, Poland; zarzycka@kul.lublin.pl (B.Z.); radekrybarski@kul.lublin.pl (R.R.)
[2] Institute of Psychology, University of Opole, 45-040 Opole, Poland; dkrok@uni.opole.pl
[*] Correspondence: kamil.tomaka@kul.pl

Abstract: Prayer is one of the most important aspects of religious/spiritual life. The psychological literature has identified various types of prayer and a few methods for measuring it. The Multidimensional Prayer Inventory (MPI) has received much attention from researchers since it allows for the capture of the most universal forms of prayer, characteristic of the Judeo-Christian tradition: Adoration, Confession, Thanksgiving, Supplication, and Reception. The aim of this article was to examine psychometric properties and clinical applications of the Polish MPI. In four studies, we established the internal structure of the MPI using Principal Component Analysis (PCA, study 1) and Confirmatory Factor Analysis (CFA, study 2), examined its validity and reliability in relation to religiousness (study 3), and analysed its clinical application (study 4). The Polish MPI has been confirmed as a reliable and valid measure of five types of prayer for use in research settings.

Keywords: prayer; religion; Multidimensional Prayer Inventory (MPI)

1. Introduction

Prayer has been described as 'the very soul and essence of religion' (James 1902, p. 361) and the most frequent way of practicing religion (Bartczuk and Zarzycka 2020). Recent polls conducted by the Social Opinion Research Centre in Poland (Social Opinion Research Centre 2018) and the Central Statistical Office (2019) showed that around 81% of Poles declare themselves as believers or deep believers, while 3% identify as non-believers. Almost half of adults in Poland (46%) participate in mass or religious service at least once a week, and around 70% declare that they pray daily or at least once a week. Interest in the subject of prayer is also systematically growing among researchers. Ladd and Spilka (2013) indicated more than 1300 studies on prayer conducted from 1960 to 2013. Our literature review indicated 457 new items published after 2013 (analysis of CINAHL, PsycINFO, and MEDLINE, searching for the keyword *prayer* in the title; 5 November 2021). Thus, these data tells us that prayer is central to the psychology of religion and integral to the key themes of modern psychology (Spilka and Ladd 2013). Despite the growing literature on prayer, there are few reported prayer measures, especially in the Polish cultural field.

1.1. Psychological Measurement of Prayer

A rather simple way to measure prayer is a single-item measure of frequency (e.g., Braam et al. 2007; Bradshaw et al. 2008). The literature provides many examples in this regard. For example, Braam et al. (2007) used a one-item method (How often do you pray or meditate?) to study the relationship between prayer and depressive symptoms among older adults in the Netherlands. Participants gave their answers on eight-point Likert scale, ranging from 1 (*never*) to 8 (*more than once a day*). Similarly, Bradshaw et al. (2008) also used a single-item measure (How often do you pray?), scored on eight-point Likert scale from 0 (*never*) to 7 (*every day*), to measure the relationship between personal prayer, image of God,

and mental health. Fincham et al. (2010), in their study on how prayer for one's partner affects willingness to engage in an extradyadic romantic behaviour, expanded the number of items to four (e.g., I pray for the well-being of my romantic partner). Ladd and Spilka (2002) claimed that single-item measures do not fully capture the nature of prayer (e.g., Brown 1994; Foster 1992) and suggested that prayer, as a complex phenomenon, should be assessed using multidimensional measures.

An analysis of the online journal database EBSCO showed that the most commonly used methods of measuring multidimensional prayer are the Prayer Functions Scale (Bade and Cook 1997), the Prayer Types Scale (Poloma and Pendleton 1989, 1991), Prayer Thoughts (Ladd and Spilka 2002, 2006), the Prayer Inventory (Bänziger et al. 2008), and the Multidimensional Prayer Inventory (Laird et al. 2004). The 58-item Prayer Functions Scale (PFS) measures the frequency with which people use prayer for specific coping functions. The PFS includes four subscales: Provides Acceptance, Provides Calm and Focus, Deferring/Avoiding, and Provides Assistance (Bade and Cook 1997). The 15-item Prayer Types Scale measures prayer behaviours, such as speaking, listening, feeling, or thinking. The four subscales include: Colloquial, Meditative, Petitionary, and Ritual prayer. Respondents are asked to indicate how often they engage in various prayer behaviours (e.g., Talk with God in your own words?) (Poloma and Pendleton 1989, 1991). The 29-item Prayer Thoughts consists of eight subscales measuring prayer types: Examination, Rest, Sacramental, Intercession, Tears, Suffering, Radical, and Petition (Ladd and Spilka 2002, 2006). The 24-item Prayer Inventory measures the extent to which participants engage in four types of prayer: Religious, Petitionary, Meditative, and Psychological (Bänziger et al. 2008). Finally, Laird et al. (2004) proposed the 15-item Multidimensional Prayer Inventory, measuring five types of prayer indicated as most characteristic of the Judeo-Christian tradition. The MPI, due to the universality of the forms of prayer measured, has been adapted to the Polish cultural context.

1.2. The Multidimensional Prayer Inventory

While developing the MPI, Laird et al. (2004) relied on an historic Christian model of prayer known by the acrostic ACTS: Adoration, Confession, Thanksgiving, and Supplication. Laird et al. (2004) noted that one additional type of prayer not covered by the ACTS mnemonic, but often described in the literature, is receptive prayer. For this reason, they decided to add this type of prayer to the MPI as a Reception dimension. The MPI includes both quantitative and qualitative items. The former refer to prayer frequency (i.e., per day and week) and duration. The latter refer to types of prayer: Adoration (e.g., I worshiped God), Confession (e.g., I admitted inappropriate thoughts, feelings, and behaviours), Thanksgiving (e.g., I offered thanks for specific things), Supplication (e.g., I made specific requests), and Reception (e.g., I tried to be open to receiving new understanding of my problems). Three items were generated to assess each of five prayer types and the response options were from 1 (*never*) to 7 (*all of the time*). The psychometric properties of the MPI have been confirmed. The authors confirmed its internal structure (χ^2 (80, N = 186) = 200.77, CFI = 0.92, RMSEA = 0.09) and high reliability of the subscales (α = 0.87 or higher).

The MPI was adopted to Israeli (Lazar 2014) and Korean (You and Yoo 2016) populations. Analyses by Lazar (2014) indicated that the structure of the MPI was valid for 1172 Jewish Israelis and that a detailed five-factor structure—Adoration, Confession, Thanksgiving, Supplication, and Reception—was superior to alternative simpler factor structures that were also examined. Moreover, Lazar (2014) added a new dimension of Habitual prayer into MPI and confirmed the six-factor structure of the MPI. Lazar (2014) also examined sex differences in the MPI. He provided evidence that men scored higher than women on Confession and Habitual prayer, whereas women obtained higher scores than men on Supplication and Thanksgiving. You and Yoo (2016) adapted the MPI into Korean. They also confirmed the five-factor structure of the MPI, its reliability and validity, and associations between prayer and subjective well-being. Thanksgiving positively and

Supplication negatively correlated with well-being. The mediating role of religious support in the relationship between prayer types and well-being was also confirmed.

The Polish cultural context lacks a method to measure prayer from a multidimensional perspective. Thus, we developed and psychometrically assessed a Polish-language version of the MPI. In this way, we fill a gap existing in the Polish psychology of religion and provide further evidence on the cultural and religious universality of the scale. We undertook several steps in translating the Multidimensional Prayer Inventory (MPI) from English to Polish. First, a team of three undergraduate students of psychology translated the measure from English into Polish. Second, it was back-translated by a bilingual Polish graduate student with a background in linguistics and training in psychological assessment. Third, three bilingual Poles, with doctoral degrees in psychology, further modified the Polish translations by re-adjusting the wording of the items.

1.3. The Present Study

We conducted four studies with separate samples to explore (study 1) and confirm (study 2) the internal structure of the MPI and establish the relationships between prayer with religiousness (study 3) and well-being (study 4) among Polish adults. In light of previous research (Laird et al. 2004; Lazar 2014), we expected that the five-factor original structure of the MPI would be replicated. Exploratory (Study 1) and confirmatory (Study 2) factor analyses were conducted to test this hypothesis. We also hypothesised that all the subscales of this Polish version of the MPI would demonstrate good reliability. We also expected positive correlations between prayer with religiousness (study 3) and well-being indicators (study 4).

2. Study 1. Exploration of the Internal Structure of the MPI

Study 1 aimed to initially explore the internal structure of the MPI using the Principal Component Analysis and assess its reliability by means of Cronbach's alpha.

2.1. Materials and Methods

2.1.1. Participants and Procedure

The research was conducted on a group of 402 adults (69% women), aged from 17 to 75 (M = 34.93, SD = 13.73). Most of the respondents (n = 386, 96%) declared themselves to be Catholics. The remaining respondents represented other Christian denominations (e.g., Orthodoxy n = 8, 2%). The vast majority of respondents rated themselves as religious (n = 177, 44%), while others described themselves as very religious (n = 48, 12%) or moderately religious (n = 56, 14%). Most of them (n = 286, 71%) reported living in urban areas. Students at the first author's university were recruited, who were then asked to further recruit participants among their friends. The data were collected through a paper-and-pencil survey. Participation in the study was voluntary and unpaid. Informed consent was obtained from all participants, and anonymity was ensured.

2.1.2. Measures

Multidimensional Prayer Inventory. The 21-item self-report Multidimensional Prayer Inventory was applied to measure the frequency of behaviours for the five types of prayer: Adoration (e.g., I worshiped God), Confession (e.g., I confessed things that I had done wrong), Thanksgiving (e.g., I offered thanks for specific things), Supplication (e.g., I made specific requests), and Reception (e.g., I tried to be receptive to wisdom and guidance) (Laird et al. 2004). The items ask participants how often they engage in various prayer behaviours, with all items answerable on a seven-point Likert scale from 1 (*never*) to 7 (*all of the time*).

2.1.3. Data Analytic Strategy

The initial testing of the factor structure of the MPI we examined by means of Principal Component Analysis (PCA) with oblimin rotation. Next, we converted the resulting factors into summative subscales and assessed their internal consistencies with Cronbach's alpha.

2.2. Results

The MPI item means ranged from 3.90 (Item 15) to 4.94 (Item 13) with a grand mean of 3.12 (SD = 0.93). Skewness ranged between -0.53 (item 13) and 0.20 (item 14) with SE = 0.12. Table 1 contains the mean and standard deviation for each MPI item. The 21 items of the MPI were entered into PCA with oblimin rotation. The factor analysis was preceded by checking sample adequacy (KMO = 0.91; Bartlett's χ^2 (105) = 4965.28, $p < 0.001$; lowest MSAk $\geq$ 0.74).

Table 1. Exploratory Factor Analysis Showing 15 Items and Factor Loadings from the Pattern Matrix (Principal Component Analysis with Oblimin rotation).

	Items	Factor Loadings					M	SD
		F1	F2	F3	F4	F5		
T6	I expressed my appreciation for my circumstances.	**0.93**	0.42	-0.59	0.44	0.58	4.52	1.64
T12	I thanked God for things occurring in my life.	**0.90**	0.50	-0.63	0.48	0.63	4.64	1.65
T2	I offered thanks for specific things.	**0.80**	0.65	-0.58	0.45	0.54	4.47	1.58
S 1	I made specific requests.	0.35	**0.91**	-0.40	0.33	0.35	4.47	1.58
S 8	I made various requests of God.	0.52	**0.85**	-0.53	0.52	0.52	4.91	1.59
S 13	I asked for assistance with my daily problems.	0.56	**0.79**	-0.53	0.58	0.54	4.94	1.66
C 14	I acknowledged faults and misbehavior.	0.49	0.45	$\mathbf{-0.93}$	0.51	0.56	4.05	1.64
C 9	I confessed things that I had done wrong.	0.55	0.42	$\mathbf{-0.92}$	0.48	0.53	3.97	1.65
C 5	I admitted inappropriate thoughts, feelings, and behaviors.	0.50	0.42	$\mathbf{-0.91}$	0.54	0.51	4.03	1.65
R 11	I opened myself up to God for insight into my problems.	0.36	0.44	-0.55	**0.91**	0.58	4.11	1.75
R 7	I tried to be receptive to wisdom and guidance.	0.54	0.33	-0.49	**0.86**	0.66	4.11	1.72
R 3	I tried to be open to receiving new understanding of my problems.	0.31	0.47	-0.54	**0.83**	0.59	4.04	1.66
A 10	I praised God.	0.59	0.38	-0.60	0.61	**0.93**	4.08	1.71
A 4	I worshiped God.	0.51	0.42	-0.55	0.61	**0.92**	4.11	1.72
A 15	I devoted time to honoring the positive qualities of God.	0.45	0.37	-0.46	0.58	**0.92**	3.90	1.67

Note. Items for each factor are listed in descending order based on loadings. Boldfaced text indicates items assigned to each factor. F1—Thanksgiving (T), F2—Supplication (S), F3—Confession (C), F4—Reception (R), F5—Adoration (A).

The analysis of the matrix of rotated factor loadings showed an internal structure of the MPI consistent with the original MPI (Laird et al. 2004). Based on Kaiser's criterion (eigenvalue higher than 1), five factors needed to be distinguished, explaining 82.98% of the total variance. Table 1 contains the MPI items, their factor loadings, and the percentage of variance explained by each of the factors. The MPI included five factors. Factor 1, Thanksgiving, includes three items that measure expressions of gratitude for life circumstances; it explained 57.50% of the total variance. Factor 2, Supplication, includes three items that measure requests for God's intervention in specific life events; it explained 8.40% of the total variance. Factor 3, Confession, includes three items that measure acknowledging faults, misdeeds, or shortcomings; these items explained 7.10% of the total variance. Factor 4, Reception, includes three items that measure passively awaiting divine wisdom or guidance; these items explained 6.13% of the total variance. Factor 5, Adoration, includes three items that measure the worship and praise of God; these items explained 3.88% of the total variance. In summary, the results of the MPI replicated the five-factor structure of the original MPI. The internal consistency indicators of the subscales in this sample were as follows: Adoration $\alpha = 0.92$, Supplication $\alpha = 0.86$, Confession $\alpha = 0.91$, Thanksgiving $\alpha = 0.90$, and Reception $\alpha = 0.85$.

2.3. Conclusions

Study 1 confirmed the five-factor structure of the Polish MPI, similar to the original English method (Laird et al. 2004). Five factors were obtained in the MPI: Adoration, Confession, Thanksgiving, Supplication, and Reception. Their internal consistency was also confirmed.

3. Study 2. Confirmation of the Internal Structure of the MPI

The aim of study 2 was to confirm the internal structure of the Polish MPI using Confirmatory Factor Analysis (CFA) and to establish its reliability. Based on Lazar (2014), four models were compared with the original five-factor model of the MPI proposed by Laird et al. (2004): (1) a uni-dimensional model, including Adoration, Reception, Thanksgiving, Confession, and Supplication; (2) a two-dimensional model, including Relational Prayer (Adoration, Reception, Thanksgiving, and Confession) and Instrumental Prayer (Supplication); (3) a two-dimensional model, including Positive Prayer (Adoration, Reception, Thanksgiving, and Supplication) and Negative Prayer (Confession); and (4) a three-dimensional model, including Positive Relational Prayer (Adoration, Reception, and Thanksgiving), Negative Relational Prayer (Confession), and Instrumental Prayer (Supplication). Thus, similarly to Lazar (2014), five models were tested using CFA: the original one and four alternatives.

3.1. Materials and Methods

3.1.1. Participants and Procedure

The research was conducted on a group of 357 adults (55% women), aged from 18 to 60 ($M = 38.55$, $SD = 12.67$). Most of the respondents ($n = 318$, 89%) declared themselves to be Catholics. The remaining respondents represented other Christian denominations (e.g., Orthodox $n = 6$, 2%, Greek Catholic $n = 3$, 1%). The vast majority of respondents rated themselves as religious ($n = 114$, 32%), while others described themselves as very religious ($n = 27$, 8%) or moderately religious ($n = 135$, 38%). Most of them ($n = 242$, 68%) reported living in urban areas. Participation was anonymous, voluntary, and followed the exact same procedures as Study 1.

3.1.2. Measures

Multidimensional Prayer Inventory. The same 21-item MPI was applied to measure the frequency of behaviours for the five types of prayer: Adoration, Confession, Thanksgiving, Supplication, and Reception (Laird et al. 2004).

3.1.3. Data Analytic Strategy

We used CFA to further examine the factor structure of the MPI analyses, conducted using Amos (Arbuckle 2016) with maximum likelihood estimation. The following statistics were used to evaluate the goodness of fit of the model: χ^2 divided by degrees of freedom (χ^2/df), the Tucker–Lewis index (TLI), the comparative fit index (CFI), the normed fit index (NFI), the standardised root mean square residual (SRMR), and the root mean squared error of approximation (RMSEA) with the 90% confidence interval (CI). Cronbach's alpha was used to assess the internal consistencies of the MPI subscales.

3.2. Results

Table 2 contains the fit indices of the models we tested. The five-factor model obtained the best fit (χ^2 (80) = 306.49, $p < 0.001$, χ^2/df = 3.81, TLI = 0.937, CFI = 0.952, NFI = 0.936, SRMR = 0.035, and RMSEA = 0.089). χ^2 showed insufficient fit, but it is known to be too restrictive, as it nearly always rejects the model when large samples are used. Regarding the other goodness-of-fit measures, RMSEA and SRMR values lower than 0.08 are considered indicative of a good fit, as are NFI, TLI, and CFI values higher than 0.90 (Bentler and Bonett 1980).

Table 2. Summary of Confirmatory Factor Analysis on the Multidimensional Prayer Inventory Scale.

Model	n	χ^2	df	TLI	CFI	NFI	SRMR	RMSEA
1. Unidimensional	357	833.64	90	0.816	0.842	0.827	**0.060**	0.152
2. Two dimensions (Relational, Instrumental)	357	627.64	89	0.870	0.886	0.870	**0.050**	0.130
3. Two dimensions (Positive, Negative)	357	608.98	89	0.870	0.890	0.873	**0.051**	0.128
4. Three dimensions (Positive Relational, Negative Relational, Instrumental)	357	404.30	87	**0.918**	**0.932**	**0.916**	**0.040**	0.101
5. Five dimensions (Laird et al. 2004)	357	306.49	80	**0.937**	**0.952**	**0.936**	**0.035**	0.089

Note. All chi-squared values were statistically significant at the $p < 0.01$ level; goodness-of-fit measures in bold type are above the accepted level.

Next, to obtain better fit indices, we decided to implement covariance of measurement errors in the tested five-dimension model for items e1 <-> e7 and e13 <-> e14. Fit indices obtained for this model were: χ^2 (78) = 228.20, $p < 0.001$, χ^2/df = 2.92, TLI = 0.957, CFI = 0.968, NFI = 0.953, SRMR = 0.030, and RMSEA = 0.074 (see Figure 1).
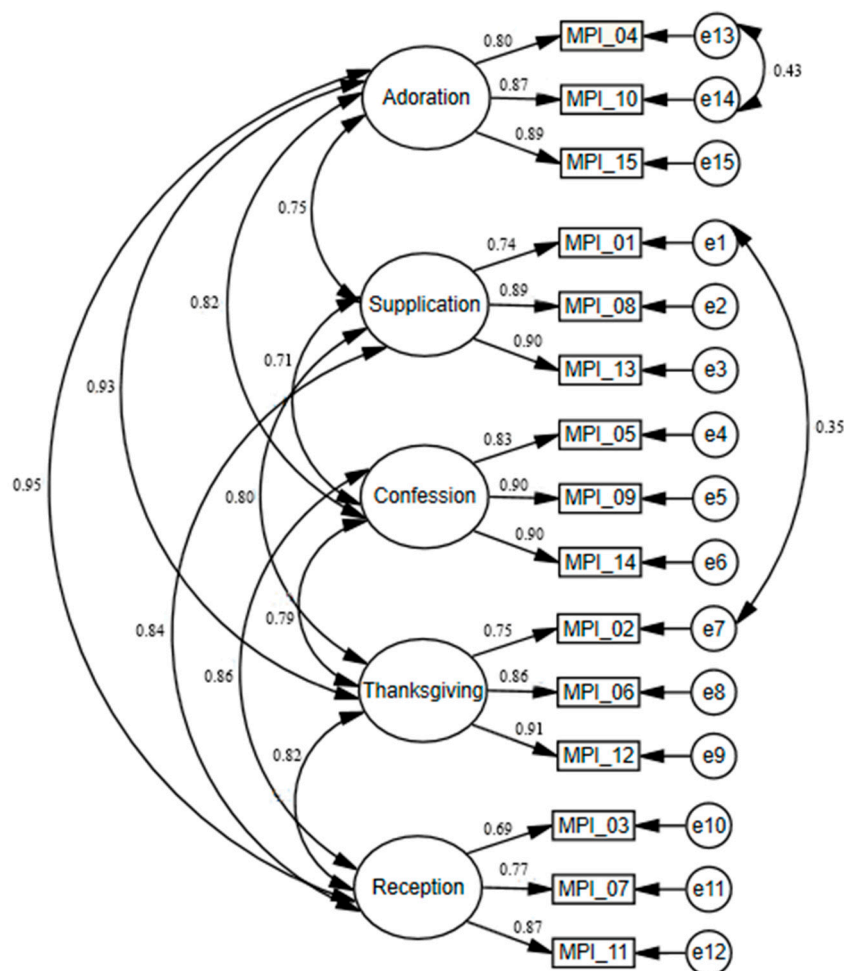
Figure 1. Confirmatory Factor Analysis of the Multidimensional Prayer Inventory: χ^2 (78) = 228.20, $p < 0.001$, χ^2/df = 2.92, TLI = 0.957, CFI = 0.968, NFI = 0.953, SRMR = 0.030, and RMSEA = 0.074.

Afterwards, we tested gender Measurement Invariance (MI) in the five-factor model. We used the procedure of Meredith (1993). In the analyses, we used the criteria recommended by Cheung and Rensvold (2002), Meredith (1993), and Chen (2007), i.e., a difference in CFI (<0.01), RMSEA (<0.03), and SRMR (<0.03 when moving from configural to metric and <0.01 when moving from metric to scalar invariance model) with increasingly

restricted models (Table 3). We did not analyse $\Delta \chi^2$ due to its sensitivity to large samples (Schermelleh-Engel et al. 2003; Vandenberg 2006).

Table 3. Gender Measurement Invariance of Multidimensional Prayer Inventory.

Models	χ^2	*df*	*p*	RMSEA	SRMR	CFI	ΔRMSEA	ΔSRMR	ΔCFI
Configural	339.02	156	0.001	0.057	0.034	0.962			
Metric	355.86	166	0.001	0.057	0.038	0.960	0.000	0.004	0.002
Scalar	383.82	181	0.001	0.056	0.039	0.957	0.001	0.001	0.003

We used multigroup confirmatory factor analysis (MGCFA) to test configural, metric, and scalar invariance (Table 3). Initially, we tested if the structure of the model was comparable in female and male groups (configural invariance). This model fit the data well (RMSEA = 0.057, SRMR = 0.034). Next, we tested the model with all factor loadings constrained to be equal across both subgroups (metric invariance). The metric invariance model also demonstrated good fit (RMSEA = 0.057, SRMR = 0.038) and changes between RMSEA, SRMR, and CFI were acceptable. Finally, we checked if all intercepts were constrained across both subgroups (scalar invariance). The scalar invariance model also fit the data well (RMSEA = 0.056, SRMR = 0.039) and changes between RMSEA, SRMR, and CFI were acceptable.

We also analysed the internal consistency of the subscales in this sample. The results were as follows: Adoration α = 0.91, Supplication α = 0.88, Confession α = 0.86, Thanksgiving α = 0.89, and Reception α = 0.83.

3.3. Conclusions

The five-factor structure of the Polish MPI was best fitting model to the data, which is consistent with the original model proposed by Laird et al. (2004). The four alternative models proposed by Lazar (2014) did not achieve satisfactory fit indices. Thus, study 2 added further support for a five-factor solution of the MPI, its reliability, and demonstrated gender measurement equivalence. The Polish version of the MPI is suitable to measure cross-gender differences accurately.

4. Study 3: Construct Validation in Relation to Religiousness

Study 3 aimed to cross-validate the MPI in relation to religiousness. The relationships between the MPI subscales and four following scales were examined: the Duke University Index (DUREL), the Religious Support Scale (RSS), and the Revised Distress Disclosure Index (RDDI). Since prayer is 'the very soul and essence of religion' (James 1902, p. 361), we expected positive correlations between the MPI subscales and other measures of religiousness. However, as prayer refers to a private, internally motivated activity, we expected stronger positive correlations between the MPI subscales with intrinsic religiosity than with organisational and non-organisational religious activity (DUREL). When people are praying, they turn to God and ask for God's support (Pargament et al. 2000). For this reason, we expected stronger positive correlations between the MPI subscales with support from God, than with support from congregation and clergy (RSS). Petition and Thanksgiving are more conducive to revealing one's needs than Adoration and Reception (Bartczuk and Zarzycka 2020). This is why we expected stronger positive correlations between disclosure to God (RDDI) with Supplication and Thanksgiving than with Reception and Adoration. The prayer of Confession can involve disclosure in a variety of ways. Awareness of guilt may, on the one hand, promote confession; on the other hand, fear of punishment may inhibit confession. We treat the relationship of the Confession subscale with disclosure exploratory.

4.1. Materials and Methods

4.1.1. Participants and Procedure

In total, the group consisted of 325 people (54% women), aged from 18 to 82 (*M* = 26.31, *SD* = 9.03). Most of the respondents (*n* = 303, 93%) declared themselves to be Catholics, while 10 (3%) reported belonging to another Christian tradition. The vast majority of respondents rated themselves as religious (*n* = 142, 44%), while others described themselves as very religious (*n* = 42, 13%) or moderately religious (*n* = 54, 17%). Most of them (*n* = 260, 80%) reported living in urban areas. Participation was anonymous, voluntary, and followed the exact same procedures as Study 1.

4.1.2. Measures

The Duke University Index (DUREL). The five-item DUREL was applied to measure the three major dimensions of religious involvement: organizational (ORA), non-organizational (NORA), and intrinsic (IR). The ORA subscale is the first item measuring public religious activities, such as attending religious services. The NORA subscale is the second item measuring frequency of private religious activities. The subscale IR consists of the final three items measuring intensity of intrinsic religious motivation (Koenig and Büssing 2010). ORA's and NORA's items are scored on a six-point Likert scale, while the IR items are scored on a five-point Likert scale. In this study, the IR subscale had a satisfactory reliability coefficient.

The Religious Support Scale (RSS). The RSS was applied to measure the participant's perception of support from God, congregation, and clergy (Zarzycka et al. 2020). Each item was rated on a five-point Likert response scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The internal consistency of the RSS obtained in this study was excellent.

Revised Distress Disclosure Index (RDDI). The 12-item RDDI (Winkeljohn Black et al. 2015) was applied to measure participants' tendency to disclose to God (e.g., I am willing to tell God about my distressing thoughts). Items were statements rated on a five-point Likert response scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The internal consistency for this sample was excellent.

Multidimensional Prayer Inventory. The same 21-item MPI was applied to measure the frequency of behaviours for the five types of prayer: Adoration, Confession, Thanksgiving, Supplication, and Reception (Laird et al. 2004).

4.2. Results

The relationships between the MPI subscales and religiousness were computed using Pearson's correlations. The results are presented in Table 4. All subscales of the MPI (Adoration, Confession, Thanksgiving, Supplication, and Reception) correlated positively with the DUREL subscales (ORA, NORA, and IR), with the subscales of the RSS (support from God, congregation, and clergy), and with the RDDI. As expected, we obtained stronger positive correlations of the MPI subscales with IR than with ORA and NORA, and with support from God more than with support from congregation and clergy.

4.3. Conclusions

To sum up, the MPI positively correlates with other measures of religiousness. All types of prayer are strongly linked to IR and support from God than to NORA, ORA and support from clergy and congregation. Thus, the types of prayer included in the MPI are more personal than public. Thanksgiving and Supplication were correlated somewhat more strongly with a tendency to disclose oneself to God than Reception and Adoration. Thus, Supplication and Thanksgiving are forms of prayer more slightly conducive to revealing individual needs than the other types of prayer.

Table 4. Descriptive statistics and correlations between the MDI subscales and DUREL, RSS, and DDI.

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1 OR	—											
2 NOR	0.75 ***	—										
3 IR	0.74 ***	0.75 ***	—									
4 God	0.73 ***	0.69 ***	0.84 ***	—								
5 Leadership	0.61 ***	0.56 ***	0.59 ***	0.60 ***	—							
6 Congregational	0.48 ***	0.46 ***	0.47 ***	0.47 ***	0.56 ***	—						
7 Disclosure	0.67 ***	0.70 ***	0.77 ***	0.80 ***	0.52 ***	0.48 ***	—					
8 Thanksgiving	0.59 ***	0.63 ***	0.72 ***	0.71 ***	0.45 ***	0.42 ***	0.68 ***	—				
9 Supplication	0.59 ***	0.59 ***	0.65 ***	0.69 ***	0.37 ***	0.37 ***	0.70 ***	0.75 ***	—			
10 Confession	0.54 ***	0.56 ***	0.61 ***	0.60 ***	0.39 ***	0.40 ***	0.59 ***	0.72 ***	0.70 ***	—		
11 Reception	0.57 ***	0.60 ***	0.68 ***	0.67 ***	0.45 ***	0.42 ***	0.66 ***	0.75 ***	0.74 ***	0.75 ***	—	
12 Adoration	0.62 ***	0.61 ***	0.72 ***	0.70 ***	0.53 ***	0.42 ***	0.63 ***	0.81 ***	0.67 ***	0.75 ***	0.78 ***	—
M	3.93	3.21	3.27	3.58	2.84	3.53	3.32	3.71	3.97	3.21	3.35	3.17
SD	1.52	1.87	1.20	1.12	1.00	0.83	0.09	1.83	1.84	1.65	1.66	1.70
Alpha	—	—	0.89	0.96	0.93	0.90	0.90	0.95	0.94	0.94	0.90	0.94

Note. ORA—Organisational; NORA—Non-organisational; IR—Intrinsic. *** $p < 0.001$.

5. Study 4: Clinical Applications of the MPI

Study 4 aimed to analyse the clinical implication of the Polish MPI. Previous research has confirmed that prayer enhances people's physical and mental health (Hebert et al. 2007; Koenig 2002; Koenig et al. 2001; Poloma and Gallup 1991; Poloma and Pendleton 1991). Jors et al. (2015) conducted a systematic literature review on the role of prayer in chronically ill patients. They showed that although most patients with chronic diseases do pray for relief from their physical and mental suffering, the intention of their prayers is not only for healing. Rather, prayer helps patients positively transform their experience of illness. Similarly, Dunn and Horgas (2000) pointed out that prayer can serve as a form of 'spiritual self-care'. These researchers reported that, among 50 respondents aged 65 years or older, 96% employed prayer to cope with life's difficulties. Another set of finds demonstrated that prayer supports mental health indirectly, by promoting positive religious coping strategies (Nooney and Woodrum 2002), fostering social support, and improving physical health status (Koenig et al. 2001). Maltby et al. (1999) showed that private prayer is moderately and positively associated with self-esteem and negatively related to trait anxiety. Maltby et al. (2008) indicated that ritual, meditative prayer, prayer experience, and praying with others were all associated with better mental health outcomes. Positive associations have been reported for Adoration, Thanksgiving, and Reception with psychological well-being (i.e., subjective well-being, self-esteem, optimism, and meaning in life). Negative correlations were observed for well-being with Confession and Supplication (Whittington and Scher 2010; You and Yoo 2016). Based on the above research, we expected positive correlations between the MPI subscales with satisfaction with life as well as religious and existential well-being, and negative correlations with anxiety and depression. Since prayer is a religious activity, we also expected stronger correlations between the MPI subscales with religious well-being than with existential well-being and satisfaction with life.

5.1. Materials and Methods

5.1.1. Participants and Procedure

The research was conducted on a group of 383 adults (59% women), aged from 18 to 45 ($M = 20.77$, $SD = 3.15$). The vast majority of respondents declared themselves to be Catholics ($n = 337$, 88%). The remaining respondents represented other Christian denominations (e.g., Orthodoxy $n = 20$, 5%, Greek Catholic $n = 8$, 2%). The vast majority of respondents rated themselves as religious ($n = 154$, 40%), while others described themselves as very religious ($n = 20$, 5%) or moderately religious ($n = 63$, 16%). Most of them ($n = 271$, 71%) reported living in urban areas. Participation was anonymous, voluntary, and followed the exact same procedures as Study 1.

5.1.2. Measures

Satisfaction with Life Scale. The five-item SWLS was applied to measure satisfaction with life, i.e., global cognitive judgments of satisfaction with one's life (e.g., In most ways, my life is close to my ideal) (Diener et al. 1985). Respondents indicated the extent to which they agreed with each item on a seven-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The internal consistency coefficient for SWLS was satisfactory (Table 5).

Table 5. Intercorrelations, Means, Standard Deviations, and Alphas for the Variables of Interest (*N* = 383).

	Variable	1	2	3	4	5	6	7	8	9	10
1	SWLS	—									
2	RWB	0.25 ***	—								
3	EWB	0.72 ***	0.36 ***	—							
4	DBR-SIS	−0.33 ***	0.02	−0.45 ***	—						
5	BSD	−0.45 ***	−0.01	−0.55 ***	0.59 ***	—					
6	Thanksgiving	0.26 ***	0.73 ***	0.29 ***	0.07	0.03	—				
7	Supplication	0.18 ***	0.73 ***	0.23 ***	0.11 *	0.04	0.84 ***	—			
8	Confession	0.17 ***	0.63 ***	0.21 ***	0.09	0.06	0.81 ***	0.75 ***	—		
9	Reception	0.19 ***	0.69 ***	0.24 ***	0.11 *	0.04	0.83 ***	0.77 ***	0.80 ***	—	
10	Adoration	0.27 ***	0.75 ***	0.28 ***	0.03	0.03	0.81 ***	0.72 ***	0.78 ***	0.81 ***	—
	M	3.97	3.59	3.93	4.79	24.64	3.35	3.59	3.13	3.03	2.89
	SD	1.10	1.25	0.89	2.20	8.30	1.84	1.95	1.76	1.64	1.77
	Alpha	0.79	0.93	0.88	0.79	0.68	0.94	0.94	0.94	0.89	0.95

Note. SWLS—Satisfaction with Life Scale; RWB—Religious Well-Being; EWB—Existential Well-Being; DBR-SIS—Direct Behavior Rating—Scale Items Scale; BSD—Brief Scree for Depression. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Spiritual Well-Being Scale (SWBS). The 20-item SWBS was applied to measure perceptions of spiritual quality of life (Paloutzian and Ellison 1982). The SWBS has two subscales: Religious Well-Being (e.g., I believe that God loves me and cares about me) and Existential Well-Being (e.g., I feel that life is a positive experience). Respondents rated items on a scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The internal consistency of the SWBS subscales obtained in this study were satisfactory (Table 5).

Direct Behavior Rating-Scale Items Scale (DBR-SIS). The three-item DBR-SIS (Von der Embse et al. 2015) was applied to measure the respondents' level of anxiety. The DBR-SIS consists of three Likert-scale items reflecting social (I am worried what others will think), cognitive (I feel restless), and physiological (I am nervous) aspects of anxiety. The response options were from 1 (*no anxiety*) to 10 (*very high anxiety*). In this study, the internal consistency coefficient was satisfactory (Table 5).

Brief Screen for Depression (BSD). The four-item BSD (Hakstian and McLean 1989) was applied to measure the respondents' level of depressive symptoms (e.g., How many times during the last 2 days have you been preoccupied by thoughts of hopelessness, helplessness, pessimism, intense worry, unhappiness, and so on?). Respondents rated the first item on a scale ranging from 1 (*not at all*) to 5 (*all of the time*), with items 2–4 on the scale ranging from 1 to 10. The BSD is scored by summing the scores for items 2–4 and multiplying the item 1 score by 4, adding four times the item 1 score to produce an overall score. The BSD has fair internal consistency (Table 5).

Multidimensional Prayer Inventory (MPI). The 21-item MPI was applied to measure the frequency of behaviours for the five types of prayer: Adoration, Confession, Thanksgiving, Supplication, and Reception (Laird et al. 2004). The internal consistency of the MPI obtained in this study was excellent (Table 5).

5.2. Results

The relationships between the studied variables were computed using Pearson's correlations. The results are shown in Table 5. Satisfaction with life, as well as religious and existential well-being positively correlated with all subscales of the MPI. Anxiety positively correlated with two subscales of the MPI (Supplication and Reception). Depression did not correlate significantly with any of the MPI subscales.

5.3. Conclusions

To sum up, as expected, all subscales of the MPI positively correlated with satisfaction with life, as well as religious and existential well-being. These data are consistent with the results of studies by other authors (Ladd and Spilka 2013; Laird et al. 2004; Maltby et al. 2008) showing the positive role of prayer in psychological and spiritual well-being. In line with our expectations, the MPI subscales were more strongly linked with religious than existential well-being or satisfaction with life. Contrary to our expectations, Supplication and Reception positively correlated with anxiety, whereas none of the MPI subscales correlated with depression. The results confirm that prayer is an important dimension of religious life, enhancing both religious/spiritual and psychological well-being.

6. General Discussion

The aim of these studies was to develop a Polish language version of the Multidimensional Prayer Inventory (Laird et al. 2004), establish its internal structure and psychometric properties, and analyse its correlations with religiousness as well as psychological and spiritual well-being. Psychometric analyses in both study 1 and 2 suggested a clear five-factor structure for the MPI and strong internal consistency for all five subscales. Both exploratory and confirmatory factor analyses supported factorial validity, consistent with Laird et al. (2004). Both studies' findings suggest that the Polish MPI is a reliable five-factor measure of Adoration, Supplication, Confession, Thanksgiving, and Reception.

To test convergent validity, we correlated the MPI subscales with other measures of religiosity (Study 3). As we expected, all subscales of the MPI had stronger positive associations with intrinsic rather than with organisational religiosity. This result is similar to that obtained by researchers constructing an English-language version of the MPI. In a related study, Laird et al. (2004) pointed out that MPI subscales were strongly correlated with the intrinsic religious orientation, attesting to the measure's good convergent validity, and reaffirming prayer as a good predictor of religiosity. In line with what we hypothesised, the MPI subscales correlated positively with religious support, but more strongly with support from God than from congregation or clergy. This result also indicates good convergent validity of the MPI since the MPI primarily measures a person's religious and spiritual behaviours focused on maintaining a relationship with God and receiving support from God. The weaker, but also significant relationship between MPI and church institutional support are in line with the results of Laird et al. (2004), showing positive relations between prayer and social interactions. In line with our expectations, Thanksgiving and Supplication correlated most strongly with a tendency to disclose oneself to God. Thus, people who address petitions or give thanks to God expose their needs and expect to receive favours from the deity (Spilka and Ladd 2013). In addition, consistent with our expectations, Adoration and Reception had weaker relationships with disclosure to God than those with Thanksgiving and Supplication. Adoration and Reception are both forms of prayer in which someone who is praying directs his/her attention not to oneself but to God. In the first case (Adoration), the person gives God the glory, and in the second (Reception) he/she opens himself/herself to receive God's grace. Therefore, these forms of prayer may be less conducive to self-disclosure before God. Confession had the weakest correlation with disclosure to God compared to all MPI measures. Confession can trigger feelings of shame about one's own weaknesses, which can generate difficulties communicating both with others (Tangney and Dearing 2003) and with God. This result is consistent with a study by Zarzycka et al. (2021) showing that people who harbour negative emotions toward God are more likely through Adoration prayer to engage in ingratiating behaviour toward God. Ingratiation is a manipulative technique that can create a sense of insincerity in a person's mind that makes intimacy with God difficult.

Study 4 revealed some clinical applications of prayer, especially in the area of well-being. (Ellison et al. 2014). Reports from researchers on the function of prayer for mental health are not consistent. While some studies reveal what appear to be salubrious effects of prayer on mental health, other studies report null, or even negative associations (e.g.,

Bradshaw et al. 2010; Maltby et al. 2008). Prayer can both raise and lower mental health. Our research partially confirmed our expectation that the MPI subscales correlate positively with mental health and well-being indicators. Indeed, it has been reported that satisfaction with life, as well as religious and existential well-being, positively correlated with all subscales of the MPI. These data are consistent with the results of studies by other authors (Ladd and Spilka 2013; Laird et al. 2004; Maltby et al. 2008) showing the positive role of prayer in psychological well-being. However, our results are not in line with what Whittington and Scher (2010) showed in that Supplication prayers had a negative link with subjective well-being. This difference may depend on whether the praying person feels that God is answering his/her requests. When prayers are not answered or implementation is delayed, individuals may experience lower levels of happiness and subjective well-being. In our study, however, we did not control for the extent to which individuals felt that their prayers were answered by God.

Contrary to our expectations, anxiety was positively correlated with two subscales of the MPI (Supplication and Reception). Our hypothesis stating a negative relationship between prayer and anxiety was based on the belief that, as one entrusts oneself to God, one's calmness and serenity increase. It may be thought that the obtained positive correlation reveals a different phenomenon, namely that in the experience of anxiety, believers resort to prayer, seeking in it help and support. Indeed, people tend to use prayer when they are experiencing difficulties, struggling, or find themselves in situations of increased tension. On the other hand, we did not control in our study for whether respondents felt that God had answered their prayers; unanswered prayers can increase anxiety (Sharp 2013). Some researchers have also reported positive relations between prayer and symptoms of anxiety (Bradshaw et al. 2010; Ellison et al. 2014). In addition, in our study we used a brief scale to assess anxiety (the Direct Behavior Rating—Scale Items Scale). It is worth using a more comprehensive anxiety scale in future studies. In addition, not in accordance with what we hypothesised, depression did not correlate significantly with any of the MPI subscales. This is an unexpected result. Previous research has reported that prayer can both reduce (Maltby et al. 1999) and increase depressive symptoms (Ellison 1995). Bonelli et al. (2012) reviewed and synthesised quantitative research examining relationships between religious/spiritual involvement and depressive symptoms or disorders covering the years 1962-2011. They showed that, on the one hand, practicing religion may help people to cope better with stressful life circumstances and surround depressed people with a supportive community. On the other hand, religious involvement may increase guilt and lead to discouragement as people fail to live up to the high standards of their religion. The lack of correlation between prayer and depression in our study may be due to the fact that we employed the short four-item scale to measure depression (Hakstian and McLean 1989) and the research was conducted in a non-clinical sample. Therefore, future studies would need to verify this result with a more comprehensive depression scale and a clinical sample. Finally, our hypothesis that the MPI subscales correlate more strongly and positively with religious rather than existential well-being and satisfaction with life was fully confirmed. Prayer is an important dimension of religious life. It is associated not only with better physical and mental health, but most of all with religious/spiritual well-being.

The limitations of the current study include the cross-sectional research design. In future work, prospective studies will be important to examine how prayer predicts subsequent outcomes, e.g., mental health and well-being. Second, due to the use of self-report measures, response biases cannot be ruled out. Third, we used broad-based samples rather than clinical samples, since these studies focused on measure development. In future work, a clinical sample would be more appropriate to capture the nuanced relationships between prayer and mental health indicators, particularly anxiety and depression. In spite of these limitations, the Polish MPI may help researchers and clinicians to assess prayer in a multidimensional manner that will help to advance research into the Polish psychology of religion.

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