

Differential Test of Aloneness (DTA-PL): Psychometric Evaluation of the Polish-Language Version and Its Relevance for Research on Close Relationships

Test Zróżnicowanego Doświadczania Samotności (DTA-PL):
ocena psychometryczna polskojęzycznej wersji narzędzia
i jej znaczenie dla badań nad bliskimi relacjami

Jacek Borys Soiński

Uniwersytet im. Adama Mickiewicza w Poznaniu
Wydział Teologiczny, Polska
jacek.soinski@amu.edu.pl
<https://orcid.org/0000-0003-4212-2711>

Alicja Jajko-Siwiek

Uniwersytet Ekonomiczny w Poznaniu
Katedra Ekonometrii, Polska
alicja.jajko-siwiek@ue.poznan.pl
<https://orcid.org/0000-0002-5202-2530>

Anna Wieradzka-Pilarczyk

Uniwersytet im. Adama Mickiewicza w Poznaniu
Wydział Teologiczny, Polska
anna.wieradzka@amu.edu.pl
<https://orcid.org/0000-0001-6152-2388>

Abstract: The article presents a psychometric evaluation of the Polish version of the Differential Test of Aloneness (DTA-PL). The study involved 577 participants. The analyses supported a three-factor structure comprising General Experience of Loneliness, Dependence on Communication, and Positive Solitude. The scales demonstrated satisfactory internal consistency (Cronbach's α ranging from 0.74 to 0.87). Model fit was acceptable (CFI = 0.892, RMSEA = 0.065). The Polish adaptation of the DTA-PL may serve as a useful instrument for research on both negative and positive aspects of being alone. In the context

of human functioning within the family, this may be of particular importance. The experience of loneliness, even among individuals living in close relationships, may affect the quality of family bonds, the sense of support, and the ability to build satisfying relationships with a partner, children, or parents. The results suggest that different forms of loneliness may also manifest within the family environment, influencing communication patterns, the level of emotional involvement, and the individual's overall functioning within the family system.

Keywords: loneliness; aloneness; positive solitude; exploratory factor analysis; confirmatory factor analysis

Abstrakt: Artykuł przedstawia ocenę psychometryczną polskiej wersji Testu Zróżnicowanego Doświadczania Samotności (DTA-PL). W badaniu uczestniczyło 577 osób. Analizy wykazały trójczynnиковą strukturę narzędzia, obejmującą Ogólne Doświadczenie Osamotnienia, Uzależnienie od Kontaktów Społecznych i Pozytywne Przeżywanie Samotności o zadowalającej rzetelności ($\alpha = 0,74\text{--}0,87$; CFI = 0,892; RMSEA = 0,065). W kontekście funkcjonowania człowieka w rodzinie może mieć to szczególne znaczenie. Doświadczenie samotności, nawet u osób żyjących w bliskich relacjach, może wpływać na jakość więzi rodzinnych, poczucie wsparcia oraz zdolność do budowania satysfakcjonujących relacji z partnerem, dziećmi lub rodzicami. Wyniki sugerują, że różne formy samotności ujawniają się również w środowisku rodzinnym, wpływając na wzorce komunikacji i ogólne funkcjonowanie jednostki w systemie rodzinnym.

Słowa kluczowe: samotność; osamotnienie; pozytywne przeżywanie samotności; eksploracyjna analiza czynnikowa; konfirmacyjna analiza czynnikowa

Introduction¹

Loneliness is a growing concern in modern society, affecting not only seniors but also younger generations, including students (Sinic 2021; Ellard et al. 2023; Qiu-Qiang et al. 2023). Research indicates a U-shaped relationship between loneliness and age (Dykstra 2009; Lasgaard et al. 2016).

Being alone can take various forms and may be experienced both negatively and positively (Long et al. 2003; Stern 2021). In English-language literature, there are three separate constructs referring to being alone: aloneness, loneliness, and solitude. However, there are no clear definitions of these terms, which makes it difficult to distinguish clearly between the positive and negative aspects of being alone. As a consequence, these terms are often used interchangeably (Larson 1990; Palgi et al. 2021). Despite the ambiguity of many definitions, the following connotations of words describing being alone may be identified: aloneness – neutral connotations; loneliness – most often negative connotations;

¹ The article was funded from the authors' own resources.

and solitude – often positive, although sometimes mixed connotations (Coplan et al. 2021).

Aloneness refers to an objective state of being physically alone, often associated with sadness and longing for contact (Galanaki 2005). Loneliness, on the other hand, is subjective isolation, a dysphoric state in which people generally feel unhappy. This state has negative connotations, associated with sadness, external shame, embarrassment, and the desire to end the emotional pain it involves (Satici and Deniz 2020). Loneliness can be an indicator and predictor of poor psychosocial functioning (Balcerowska and Bereznowski 2023). Loneliness is defined as the experience of inconsistency between the possessed and desired quantity and quality of social relationships (Cacioppo and Cacioppo 2012; van Baarsen et al. 2001). However, solitude is a consciously chosen communicative separation from others (Long and Averill 2003). It is a mental state sought to promote creativity, facilitating self-reflection, self-regulation, concentration, thinking, and learning (Heinrich and Gullone 2006; Larson et al. 1982). Solitude is considered a basic human need that ensures healthy psychological development and increased maturity (Davies 1996; Winnicott 1958). Śliwak and colleagues (2019, 371) characterize solitude as “fully consciously choosing solitude, both in the physical and spiritual dimensions, in order to deeper understand and create one’s personality.” Therefore, solitude is referred to as positive aloneness (Rubenstein and Shaver 1982) and is defined as “the constructive use of time alone” (Galanaki 2013, 80). Observable activities of people who experience solitude include studying, working, reading, writing, exercising, walking, engaging in hobbies, and listening to music.

Despite conceptual distinctions between solitude and loneliness, psychological research on the positive aspects of being alone often conflates these states (Gizatullina et al. 2016), or associates solitude with negative motivational factors while overlooking constructive motivation (Thomas and Azmitia 2019).

Although psychology has made many attempts to describe the experience of loneliness, these are dominated by a one-sided approach to being alone, treating it as a negative and threatening phenomenon² (Leontiev 2019; Weinstein, Hansen and Nguyen 2023). Psychological reflection on the positive aspects of being alone was undertaken by Leontiev (2011a). He referred to the statement by Moustakas (1972) that loneliness is a challenge that can lead a person to become more sensitive, more human, and more fully developed. Leontiev demonstrated a correlation between the loss of meaning in life and alienation, and he also identified another type of being alone that correlates with a sense of meaning in

² A one-sided and negative way of understanding loneliness is found in the vast majority of tools for diagnosing loneliness that have been available for a long time, e.g. the most famous loneliness scale of the University of California in Los Angeles UCLA D (Russell 1996).

life and contributes to deepening the relationship with oneself, namely positive solitude. Because previously constructed scales for measuring aspects of positive solitude proved to be unsatisfactory, and because of the lack of tools capable of diagnosing the relationship between the positive and negative aspects of being alone, Osin and Leontiev (2013) developed a new inventory that included both of these dimensions.

The basic Russian-language version of the Differential Test of Aloneness (DTA; *Differentsialnyi oprosnik perezhivaniya odinochestva* – DOPO-3) consists of 40 items grouped into three scales: General Experience of Loneliness, Dependence on Communication, and Positive Solitude. A short 24-item version of the DTA (DOPO-3k) was also developed, in which only three higher-order factors were distinguished, without division into subscales. In the present study, the short 24-item version was used. The General Experience of Loneliness scale measures the level of loneliness and lack of communication with other people. The Dependence on Communication subscale indicates a rejection of loneliness and an individual's inability to be alone. The Positive Solitude subscale reflects the level of a person's ability to use time spent alone constructively for self-development and self-discovery.

The psychometric properties of both versions of the DTA were satisfactory. Three second-order factors accounted for 78.6% of the variance. Cronbach's alpha coefficients for the higher-order scales ranged from 0.81 to 0.90. The Dependence on Communication subscale showed a moderately positive correlation with the General Experience of Loneliness and a strong negative correlation with Positive Solitude. In contrast, the correlation between the General Experience of Loneliness and Positive Solitude varied considerably across samples, suggesting that a positive attitude toward solitude is characterized by substantial individual variability (Leontiev 2019, 556).

The aim of this study was to evaluate the psychometric properties of the Polish adaptation of the Differential Test of Aloneness (DTA-PL), with particular emphasis on its factor structure and internal consistency.

I. Methods

I.1. Participants

The study was conducted online. Participants were recruited through several Facebook forums and four university mailing lists at Adam Mickiewicz University in Poznań, Poland. They were informed about the purpose of the study and gave their informed consent to participate. The sample comprised 577 participants (386 women and 191 men) aged 18 to 59 years ($M = 24.81$, $SD = 6.25$). It consisted

mainly of young adults, including students and individuals at the beginning of their professional careers. With regard to educational attainment, nearly two thirds of the sample had completed secondary education ($N = 371$, 64.3%), 198 participants (34.3%) held a university degree, and 8 (1.4%) had completed vocational school. Cases with missing data were excluded from the analysis (12 participants, 2.04% of the sample).

1.2. Measures

The short version of the Differential Test of Aloneness (DTA) was used in the study (Osin and Leontiev 2013; Leontiev 2019). The Polish version (DTA-PL) is provided in Appendix A. The DTA is a self-report questionnaire consisting of 24 items grouped into three scales: General Experience of Loneliness, Dependence on Communication, and Positive Solitude. The questionnaire uses a 4-point Likert scale. For interpretative purposes, the sum of the points in each subscale may be divided by the number of items, yielding mean scores that facilitate comparison across subscales.

The General Experience of Loneliness scale, regarded as a meaningful equivalent of the UCLA Loneliness Scale (Leonova et al. 2021), measures the actual experience of loneliness and lack of communication with others. The Dependence on Communication scale reflects the rejection of loneliness, the negative and dysphoric perception of loneliness as a problem, and the respondent's inability to be alone. The Positive Solitude scale, understood as a joy and a resource of solitude, assesses a person's ability to use time spent alone constructively for self-development and self-knowledge. The reliability and validity of the DTA were confirmed in a study conducted on a large sample of internet users (Osin and Leontiev 2013).

1.3. Translation Process

The Polish version of the DTA, referred to as DTA-PL, was prepared using the back-translation method with the consent of the original authors (Osin and Leontiev 2013). First, two translators—a Russian philologist and a Russian-speaking psychologist—translated the original Russian version of the questionnaire into Polish. After discussion, a unified Polish version was agreed upon. Next, two native-speaker philologists independently translated the Polish version back into Russian. Following the back-translation process and further consultation with the translators, the first experimental version of the Polish DTA was prepared.

Like the original instrument, the experimental version consisted of 24 items rated on a 4-point Likert scale, ranging from 1 (“I disagree”) to 4 (“I agree”). The items were grouped into three subscales: General Experience of Loneliness (Ogólne Doświadczenie Osamotnienia [ODO] in Polish), Dependence on Communication (Uzależnienie od Kontaktów Społecznych [UKS] in Polish), and Positive Solitude (Pozytywne Przeżywanie Samotności [PPS] in Polish).

1.4. Data Analysis

To determine the factor structure that best represented the DTA-PL, both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were performed. Exploratory factor analysis was used to examine the factor structure of the DTA-PL by analyzing the relationships between items. The adequacy of the correlation matrix was assessed using the Kaiser–Meyer–Olkin measure (KMO) and Bartlett’s test of sphericity (Bartlett 1950). The KMO statistic ranges from 0 to 1, with higher values indicating a stronger basis for applying factor analysis to assess relationships between variables. According to Kaiser (1974), a KMO value above 0.80 is considered high. In the case of Bartlett’s test of sphericity, a p value lower than 0.05 typically indicates that factor analysis is appropriate.

The number of factors was then determined using three criteria: the Cattell scree test, the Kaiser criterion, and parallel analysis (PA). The scree test involves identifying the point on the plot at which the decline in eigenvalues begins to level off. According to the Kaiser criterion, only factors with eigenvalues greater than 1 should be retained. In parallel analysis, the number of retained factors should be lower than the number of factors obtained for random data (O’Connor 2000; Rived-Ocaña et al. 2020).

In the next step, item communalities were assessed. Low communalities, typically below 0.40, indicate that an item does not fit well with the underlying factor structure identified by EFA and should therefore be removed (Costello and Osborne 2005). The factors were then rotated. Oblique rotation (direct oblimin), also used by Osin and Leontiev (2013), was applied because of the theoretical assumption that the DTA-PL factors are correlated. Finally, items with high loadings on each factor were examined to determine whether they formed coherent dimensions. Following Pituch and Stevens (2016), factor loadings above 0.50 were treated as satisfactory.

Confirmatory factor analysis was used to verify whether the factor structure identified in the exploratory analysis could be confirmed. Structural equation modeling procedures were applied to estimate the factor model (StataCorp 2023). The tested model was estimated using the maximum likelihood method. Model fit was evaluated using five indices: chi-square, the chi-square/df ratio,

the Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), and the Tucker–Lewis Index (TLI). Values of χ^2/df below 5 indicate a satisfactory fit of the model to the data. Acceptable values are above 0.90 for CFI and TLI and below 0.08 for RMSEA (Hu and Bentler 1999). Descriptive statistics and reliability analysis (Cronbach's alpha) were also conducted to assess the psychometric properties of the Polish version of the DTA-PL.

Statistical analyses were performed using IBM SPSS Statistics 29 and Stata/SE 18.

2. Results

2.1. Exploratory Factor Analysis

In order to identify the underlying factor structure of the DTA-PL, the data were subjected to exploratory factor analysis (EFA). First, the Kaiser–Meyer–Olkin measure of sampling adequacy (KMO) was examined, and the results indicated that the sample was adequate for factor analysis ($KMO = 0.897$). Bartlett's test of sphericity was also performed and proved significant ($\chi^2(276) = 5193.54$, $p < 0.001$), indicating that the correlation matrix was suitable for factor analysis.

Next, three criteria were used to determine the number of factors to be retained for further analysis: the Cattell scree test, the Kaiser criterion, and parallel analysis (PA). According to the Kaiser criterion, four factors should be retained, as four eigenvalues exceeded 1. The scree test also suggested a four-factor solution, explaining 54.68% of the total variance. However, the results of parallel analysis indicated that only three factors should be retained.

On the basis of these results, a three-factor solution was adopted. In the next step, item communalities were assessed. Because of a low communality value (0.088), item 13 from the original Dependence on Communication (UKS) subscale was removed. An updated exploratory factor analysis with oblimin rotation was then conducted. Subsequently, item 19 from the Positive Solitude (PPS) subscale of the DTA-PL was removed because of its low factor loading (0.425).

The final exploratory factor analysis yielded a three-factor solution accounting for 52.34% of the total variance. Factor 1, corresponding to the Dependence on Communication (UKS) subscale, explained 23.94% of the variance; factor 2, corresponding to the General Experience of Loneliness (ODO) subscale, explained 19.03%; and factor 3, corresponding to the Positive Solitude (PPS) subscale, explained 9.37%.

Factor loadings for the DTA-PL items ranged from -0.596 to 0.808 , with absolute values ranging from 0.518 to 0.808 . Absolute factor loadings ranged from 0.59 to 0.81 for the UKS subscale, from 0.65 to 0.77 for the ODO subscale, and from 0.52 to 0.70 for the PPS subscale.

2.2. Confirmatory Factor Analysis

Following the analytical approach adopted by Cvetek and colleagues (2022), confirmatory factor analysis was performed after the exploratory factor analysis in order to assess model fit. For the reasons described in the previous section, a three-factor model was tested. A statistical summary of the analysis is presented in Table 1.

Table 1. Standardised regression weights – Results of Confirmatory Factor Analysis of Three-Factor DTA-PL Scale

Items		Correlated Three-Factor Model		
DTA	DTA-PL	Factor 1 UKS	Factor 2 ODO	Factor 3 PPS
2	2	0.634		
3	3	-0.665		
8	8	0.684		
11	11	0.837		
18	17	0.766		
20	18	0.510		
22	20	-0.635		
23	21	0.695		
1	1		0.673	
4	4		0.613	
5	5		0.664	
6	6		0.692	
10	10		0.645	
14	13		0.653	
16	16		0.740	
21	19		0.749	
7	7			0.597
9	9			0.492
12	12			0.572
15	14			0.572
17	16			0.662
24	22			0.510

Note: DTA – original short version of DTA Scale, DTA-PL – Polish version of DTA. All factor loadings are significant at $p < 0.01$.

In the estimated model, the three latent factors were allowed to correlate (Figure 1). The estimated correlations between the three factors (UKS, ODO, and PPS) were similar to those reported by Leontiev (2019, 556). As expected, in the present study the Dependence on Communication subscale showed a moderately positive correlation with General Experience of Loneliness ($\beta = 0.16, p < 0.001$) and a strong negative correlation with Positive Solitude ($\beta = -0.48, p < 0.001$). The correlation between General Experience of Loneliness and Positive Solitude was small ($\beta = 0.08, p = 0.106$) and statistically non-significant.

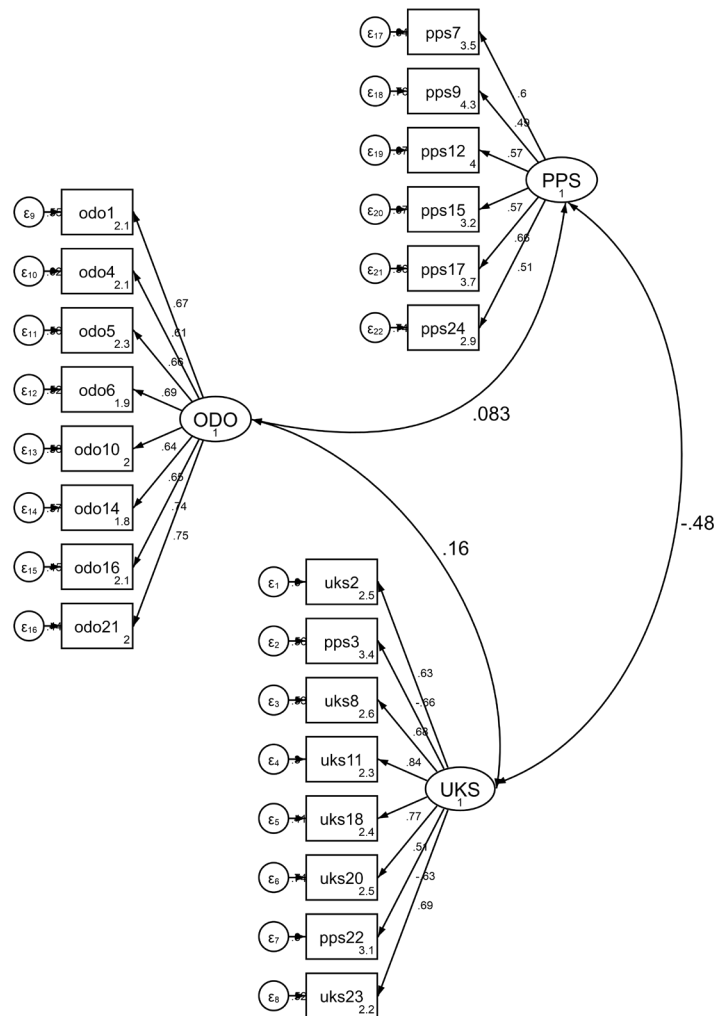


Figure 1. Confirmatory factor analysis of the three-factor DTA-PL

The results indicate that the proposed three-factor model was acceptable. The chi-square test was statistically significant ($\chi^2 = 707.9$, $df = 206$, $\chi^2/df = 3.436$, $p < 0.001$). Other model fit indices were as follows: the Root Mean Square Error of Approximation (RMSEA) was 0.065, with a 90% confidence interval of [0.06–0.07]; the Comparative Fit Index (CFI) was 0.892; and the Tucker–Lewis Index (TLI) was 0.879. These values indicate a reasonably satisfactory fit and approach the criteria for acceptable model fit proposed by Hu and Bentler (1999).

2.3. Descriptive and Reliability Statistics of DTA-PL

The descriptive statistics and the Cronbach alpha reliability coefficients for each subscale, along with the total DTA-PL scale, were calculated and presented in Table 2. All Cronbach alpha coefficients reflect adequate reliability.

Table 2. Descriptive and Reliability Statistics for the DTA-PL Subscales and the DTA-PL Total Score

Subscale	M	Md	SD	Skewness	Kurtosis	Min.	Max.	Cronbach Alpha	Number of Items
UKS	14.17	13	5.09	0.78	−0.14	8	31	0.8663	8
ODO	15.97	16	5.04	0.26	−0.58	7	28	0.8702	8
PPS	18.24	18	3.37	−0.52	0.28	6	24	0.7396	6
DTA-PL Total	50.99	51	8.16	0.30	−0.05	30	76	0.8339	22

Note: N = 577. M = arithmetic mean. Md = median. Min. = minimum. Max. = maximum. UKS = subscale of the DTA-PL. ODO = subscale of the DTA-PL. PPS = subscale of the DTA-PL. DTA-PL Total = total score of the DTA-PL scale.

2.4. Replication of Confirmatory Factor Analysis in an Independent Sample

To test the robustness of the proposed factor structure and verify its stability, we conducted a replication of the confirmatory factor analysis on an independent sample of 359 participants (62.4% female; $M = 21.72$, $SD = 3.79$).

The hypothesized three-factor model (ODO, UKS, PPS) again demonstrated satisfactory internal consistency (ODO $\alpha = 0.873$; UKS $\alpha = 0.856$; PPS $\alpha = 0.736$). The model fit indices were as follows: $\chi^2(206) = 684.80$, $p < 0.001$, CFI = 0.834, TLI = 0.814, and RMSEA = 0.081 (90% CI [0.074, 0.088]), indicating an acceptable fit. The latent factors showed clear and theoretically consistent interrelations: General Experience of Loneliness (ODO) and Dependence on Communication

(UKS) were not significantly correlated ($\beta = 0.065$, $p = 0.284$); ODO was modestly and positively associated with Positive Solitude (PPS; $\beta = 0.225$, $p < 0.001$); and UKS was strongly and negatively associated with PPS ($\beta = -0.439$, $p < 0.001$). These results support the stability of the proposed factor structure across different samples.

3. Discussion

The present study aimed to examine the psychometric properties of the Polish adaptation of the DTA (Osin and Leontiev 2013). The findings suggest that the DTA-PL, with its multidimensional approach to loneliness, is a valuable tool for research on its different forms.

Although recent attempts have been made to measure the positive aspects of a person's voluntary choice to spend time alone (Palgi et al. 2021), these measures remain one-sided. Also noteworthy is the recently developed Motivation for Solitude Scale – Short Form (Thomas and Azmitia 2019), which distinguishes between two types of motivation for solitude: self-determined motivation and non-self-determined motivation. Although the Self-Determined Solitude (SDS) subscale appears to be the closest to the DTA Positive Solitude subscale, the Motivation for Solitude Scale does not include the other two important dimensions measured by the DTA.

Furthermore, negatively understood loneliness or alienation and positively understood solitude are often not clearly distinguished in the psychological literature. Although these concepts can be differentiated linguistically and semantically, at the level of operationalization they often merge into a single definition. When completing a questionnaire, respondents themselves may not differentiate between these concepts, and the researcher may conclude on the basis of their declarations that a given person feels lonely. The DTA questionnaire differs in this respect. It assumes that the respondent may experience loneliness in its various aspects, or may not experience it at all. Although this may be seen as a somewhat risky assumption, it gives the respondent greater freedom of choice and appeals to self-awareness and self-reflection. Such an approach to the respondent as a self-determining and self-aware person is characteristic of positive psychology (Leontiev 2011b) and constitutes an important advantage of the DTA questionnaire.

The validation of the Polish adaptation of the DTA indicates that it is a tool with very good psychometric properties and a structure consistent with the original version. The accuracy of the DTA-PL questionnaire is supported by the results of the exploratory factor analysis, which confirmed the presence of three factors corresponding to the constructs under study.

To further confirm the conclusions presented here and the usefulness of the DTA-PL questionnaire for research on the different dimensions of loneliness, it would be valuable to examine its relationship with existing Polish measures of loneliness, such as the Polish adaptation of the UCLA Loneliness Scale (Kwiatkowska 2018), the Polish adaptation of the De Jong Gierveld Loneliness Scale (DJGLS) (Grygiel et al. 2013), or the Scale of Feeling Lonely Among Others (Ryś 2020). An important direction for future research would also be to compare the diagnostic value of the DTA-PL questionnaire with scales measuring positive solitude (Palgi et al. 2021), although such scales have not yet been adapted into Polish.

The diagnostic value of the DTA-PL questionnaire should also be verified by examining its relationships with measures of psychological well-being, stressful life events and coping outcomes, as well as with measures of meaning in life. Such research could further confirm the usefulness of the DTA-PL as a tool for predicting feelings of loneliness in relation to life circumstances, coping with difficulties, social adaptation, and emotional functioning.

Another advantage of the DTA-PL questionnaire is its brevity. However, it is possible that this advantage is not entirely beneficial from a psychometric point of view, especially since only 22 items across three subscales were retained in the Polish adaptation of the DTA-PL.

Due to the relatively low mean age of the respondents (24.81 years), further research should be conducted on samples that are more diverse in terms of age. Positive solitude is important across the lifespan, but it may play a particularly significant role in old age. Older adults, due to various existential experiences, such as the loss of loved ones, as well as psychophysical limitations, may face increasing difficulties in engaging in social activities and may have to cope with greater amounts of time spent in isolation. Research on older and more age-diverse samples could therefore shed additional light on the role of age in the development and experience of different forms of loneliness.

The short DTA-PL scale has very good psychometric properties and may be recommended for further empirical research on the human experience of loneliness, especially on the phenomenon of positive solitude. The DTA-PL may also prove useful in assessment, as positive solitude—the satisfying and constructive experience of being alone—may constitute an important personal resource when other resources are weakened or exhausted. A deeper understanding of positive solitude may also support the development of interventions aimed at improving individual psychosocial functioning.

Conclusion

In conclusion, the Differential Test of Aloneness (Osin and Leontiev 2013) and its Polish-language version (DTA-PL) provide a valuable tool for assessing and understanding different dimensions of being alone, including both its positive and negative aspects. The present findings support the usefulness of the DTA-PL for research on loneliness as a multidimensional experience and point to its potential relevance for studies on mental well-being and intervention strategies. In the context of family functioning, this is of particular relevance. Loneliness – even when experienced within close relationships – may affect the quality of family bonds, the sense of mutual support, and the capacity to build satisfying relationships with a partner, children, or parents. The DTA-PL, by distinguishing between general loneliness, dependence on social contact, and positive solitude, may thus serve as a useful diagnostic tool in research on relational and family dynamics.

Appendix A

Kwestionariusz Testu Zróznicowanego Doświadczania Samotności Differential Test of Aloneness Questionnaire (DTA-PL) E.N. Osin, D.A. Leontiev – DOPO3

(opracowanie wersji polskiej: J. B. Soinński, A. Jajko-Siwiek, A. Wieradzka-Pilarczyk 2026)

Przeczytaj podane niżej twierdzenia i oceń, na ile się z każdym z nich zgadzasz, wybierając jedną z czterech opcji odpowiedzi:

1 – Nie zgadzam się; 2 – Raczej się nie zgadzam; 3 – Raczej się zgadzam; 4 – Zgadzam się.

Zaznacz liczbę odpowiadającą wybranej opcji.

1. Czuję się samotny/samotna	1 2 3 4
2. Gdy obok mnie nikogo nie ma, odczuwam tęsknotę	1 2 3 4
3. Lubię przebywać sam/sama ze sobą	1 2 3 4
4. Są ludzie, z którymi mogę porozmawiać	1 2 3 4
5. Nie mam nikogo, do kogo mógłbym/mogłabym się zwrócić	1 2 3 4
6. Ciężko mi znaleźć ludzi, z którymi można by się podzielić swoimi myślami	1 2 3 4
7. W samotności przychodzą ciekawe pomysły	1 2 3 4

8. Ciężko mi być daleko od innych ludzi	1 2 3 4
9. Są odczucia, które ma się tylko będąc sam/sama ze sobą	1 2 3 4
10. Są ludzie, którzy rozumieją mnie naprawdę	1 2 3 4
11. Nie lubię zostawać sam/sama	1 2 3 4
12. Żeby zrozumieć niektóre ważne rzeczy, trzeba pozostać samemu/samej ze sobą	1 2 3 4
13. Czuję się porzucony/porzucona	1 2 3 4
14. W samotności głowa lepiej pracuje	1 2 3 4
15. Są ludzie wokół mnie, ale nie ze mną	1 2 3 4
16. W samotności człowiek poznaje samego siebie	1 2 3 4
17. Źle znoszę brak towarzystwa	1 2 3 4
18. Najgorsze, co można uczynić człowiekowi, to zostawić go samego	1 2 3 4
19. Wydaje mi się, że nikt mnie nie rozumie	1 2 3 4
20. Dobrze czuję się w domu, gdy jestem sam/sama	1 2 3 4
21. Gdy pozostaję sam/sama, odczuwam dyskomfort	1 2 3 4
22. W samotności każdy widzi w sobie to, czym jest naprawdę	1 2 3 4

Źródło / Source: Soiński et al. 2026.

Klucz / Key:

Skala DTA-PL składa się z trzech podskal / The DTA-PL scale consists of three subscales:

- ogólne doświadczenie osamotnienia (ODO) / General Experience of Loneliness: 1, 4*, 5, 6, 10*, 13, 15, 19;
- uzależnienie od kontaktów społecznych (UKS) / Dependence on Social Contacts: 2, 3*, 8, 11, 17, 18, 20*, 21;
- pozytywne przeżywanie samotności (PPS) / Positive Solitude: 7, 9, 12, 14, 16, 22.

(* pozycje odwrócone według formuły: 5 – n / * items reversed: 5 – n)

Bibliography

Balcerowska, J. M. and P. Bereznowski. 2023. "The Generalized Problematic Internet Use Scale 2 in a Polish Sample: Psychometric Validation and Relationship with Specific Internet-Related Disorders and Psychosocial Functioning." *Current Issues in Personality Psychology*, 11(3): 228–239. <https://doi.org/10.5114/cipp/151869>.

- Bartlett, M. S. 1950. "Tests of Significance in Factor Analysis." *British Journal of Psychology*, 3(2): 77–85.
- Cacioppo, J. T. and S. Cacioppo. 2012. "The Phenotype of Loneliness." *European Journal of Developmental Psychology*, 9(4): 446–452. <https://doi.org/10.1080/17405629.2012.690510>.
- Coplan, R. J., J. C. Bowker and L. J. Nelson. 2021. "Alone Again: Revisiting Psychological Perspectives on Solitude." In: *The Handbook of Solitude: Psychological Perspectives on Social Isolation, Social Withdrawal, and Being Alone*, edited by R. J. Coplan, J. C. Bowker and L. J. Nelson, 3–15. Wiley-Blackwell.
- Costello, A. B. and J. W. Osborne. 2005. "Best Practices in Exploratory Factor Analysis: Four Recommendations for Getting the Most from Your Analysis." *Practical Assessment, Research, and Evaluation*, 10(7): 1–9.
- Cvetek, M., P. Pučnik, R. Cvetek and R. Globokar. 2022. "Relational Ethics Scale: Psychometric Evaluation of the Slovene-Language Version." *Bogoslovni vestnik / Theological Quarterly*, 82 (1): 203–216. <https://doi.org/10.34291/BV2022/01/Cvetek>.
- Davies, M. G. 1996. "Solitude and Loneliness: An Integrative Model." *Journal of Psychology and Theology*, 24(1): 3–12. <https://doi.org/10.1177/009164719602400101>.
- Dykstra, P. A. 2009. "Older Adult Loneliness: Myths and Realities." *European Journal of Ageing*, 6(2): 91–100. <https://doi.org/10.1007/s10433-009-0110-3>.
- Ellard, O. B., C. Dennison, and H. Tuomainen. 2023. "Interventions Addressing Loneliness amongst University Students: A Systematic Review." *Child and Adolescent Mental Health*, 28(4): 512–523. <https://doi.org/10.1111/camh.12614>.
- Galanaki, E. 2005. "Solitude in the School: A Neglected Facet of Children's Development and Education." *Childhood Education*, 81(3): 128–132. <https://doi.org/10.1080/00094056.2005.10522255>.
- Galanaki, E. 2013. "Solitude in Children and Adolescents: A Review of the Research Literature." *Psychology and Education: An Interdisciplinary Journal*, 50(3–4): 79–88.
- Gizatullina, A., S. Satiyeva, T. Kunslyamova, A. Edigenova, Z. Zhanna and A. Burahanova. 2016. "Comparative Analysis of Gender and Age Differences in the Visions of Solitude." *Indian Journal of Science and Technology*, 9(20): 1–4. <https://doi.org/10.17485/ijst/2016/v9i20/94476>.
- Grygiel, P., G. Humenny, S. Rebisz, P. Świtaj and J. Sikorska. 2013. "Validating the Polish Adaptation of the 11-Item De Jong Gierveld Loneliness Scale." *European Journal of Psychological Assessment*, 29(2): 129–139. <https://doi.org/10.1027/1015-5759/a000130>.
- Heinrich, L. M. and E. Gullone. 2006. "The Clinical Significance of Loneliness: A Literature Review." *Clinical Psychology Review*, 26(6): 695–718. <https://doi.org/10.1016/j.cpr.2006.04.002>.
- Hu, L. and P. M. Bentler. 1999. "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus New Alternatives." *Structural Equation Modeling*, 6(1): 1–55. <https://doi.org/10.1080/10705519909540118>.
- Kaiser, H. F. 1974. "An Index of Factorial Simplicity." *Psychometrika*, 39(1): 31–36.
- Kwiatkowska, M. M., R. Rogoża and K. Kwiatkowska. 2018. "Analysis of the Psychometric Properties of the Revised UCLA Loneliness Scale in a Polish Sample of Youth." *Current Issues in Personality Psychology*, 6(2): 164–170. <https://doi.org/10.5114/cipp/2017.69681>.
- Larson, R. 1990. "The Solitary Side of Life: An Examination of the Time People Spend Alone from Childhood to Old Age." *Developmental Review*, 10(2): 155–183. [https://doi.org/10.1016/0273-2297\(90\)90008-R](https://doi.org/10.1016/0273-2297(90)90008-R).
- Larson, R., M. Csikszentmihalyi and R. Graef. 1982. "Time Alone in Daily Experience: Loneliness or Renewal?" In: *Loneliness: A Sourcebook of Current Theory, Research, and Therapy*, edited by L. A. Peplau and D. Perlman, 40–53. Wiley.
- Lasgaard, M., K. Friis and M. Shevlin. 2016. "Where Are All the Lonely People? A Population-Based Study of High-Risk Groups across the Life Span." *Social Psychiatry and Psychiatric Epidemiology*, 51(10): 1373–1384. <https://doi.org/10.1007/s00127-016-1279-3>.

- Leonova, I. M., N. A. Dobrovolska, K. O. Chyzyh and T. V. Hovorun. 2021. "Cognitive Models of Loneliness in Women in Early and Middle Adulthood." *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, 12(4): 107–138. <https://doi.org/10.18662/brain/12.4/241>.
- Leontiev, D. A. 2011a. "Ekzistentsialniy Smysl Odinochestva [The Existential Meaning of Solitude]." *Ekzistentsialnaya Traditsiya: Filosofiya, Psikhologiya, Psikhoterapiya*, 2(19): 101–108.
- Leontiev, D. A. 2011b. "Podkhod Cherez Pozitivnye Cherty Lichnosti: Ot Psikhologicheskogo Blagopoluchiya k Dobrodetelyam i Silam Kharaktera [Approach through Positive Personality Traits: From Psychological Well-Being to Virtues and Character Forces]." In: *Lichnostnyy Potentsial: Struktura i Diagnostika*, edited by D. A. Leontyev, 76–91. Smysl.
- Leontiev, D. A. 2019. "The Dialectics of Aloneness: Positive vs. Negative Meaning and Differential Assessment." *Counselling Psychology Quarterly*, 32(3–4): 548–562. <https://doi.org/10.1080/09515070.2019.1640186>.
- Long, C. R. and J. R. Averill. 2003. "Solitude: An Exploration of the Benefits of Being Alone." *Journal for the Theory of Social Behaviour*, 33(1): 21–44. <https://doi.org/10.1111/1468-5914.00204>.
- Long, C. R., M. Seburn, J. R. Averill and T. A. More. 2003. "Solitude Experiences: Varieties, Settings, and Individual Differences." *Personality and Social Psychology Bulletin*, 29(5): 578–583. <https://doi.org/10.1177/0146167203029005003>.
- Moustakas, Clark E. 1972. *Loneliness and Love*. Englewood Cliffs, NJ: Prentice-Hall.
- O'Connor, B. P. 2000. "SPSS and SAS Programs for Determining the Number of Components Using Parallel Analysis and Velicer's MAP Test." *Behavior Research Methods, Instruments, & Computers*, 32(3): 396–402. <https://doi.org/10.3758/BF03200807>.
- Osin, E. N., and D. A. Leontiev. 2013. "Differentsialnyi Oprosnik Perezhivaniya Odinochestva: Struktura i Svoistva [Differential Test of Aloneness (DTA): Structure and Properties]." *Psychology. Journal of a Higher School of Economics*, 10(1): 55–81.
- Palgi, Y., D. Segel-Karpas, S. Ost Mor, Y. Hoffman, A. Shrira and E. Bodner. 2021. "Positive Solitude Scale: Theoretical Background, Development, and Validation." *Journal of Happiness Studies*, 22: 3357–3384. <https://doi.org/10.1007/s10902-021-00367-4>.
- Pituch, Keenan A. and James P. Stevens. 2016. *Applied Multivariate Statistics for the Social Sciences. 6th ed.* New York: Routledge.
- Qiu-Qiang, Z., L. Bo-Lin, Y. Wei-Wei, Z. Yu and Z. Qi-Zhe. 2023. "Analysis of Initial Sandplay Characteristics among University Students with Different Levels of Loneliness." *BMC Psychiatry*, 23(1): 930. <https://doi.org/10.1186/s12888-023-05443-y>.
- Rived-Ocaña, M., M. L. Schweer-Collins, M. Rodríguez-González, S. A. Crabtree, L. B. G. del Cid and T. D. Hargrave. 2020. "Spanish Adaptation of the Relational Ethics Scale." *Contemporary Family Therapy*, 42: 346–359. <https://doi.org/10.1007/s10591-020-09540-y>.
- Rubenstein, C. M. and P. Shaver. 1982. "The Experience of Loneliness." In: *Loneliness: A Sourcebook of Current Theory, Research, and Therapy*, edited by L. Peplau and D. Perlman, 206–223. Wiley.
- Russell, D. W. 1996. "UCLA Loneliness Scale (Version 3): Reliability, Validity, and Factor Structure." *Journal of Personality Assessment*, 66(1): 20–40. https://doi.org/10.1207/s15327752jpa6601_2.
- Ryś, M. 2020. "Poczucie Osamotnienia jako Symptom Naszych Czasów [The Feeling of Loneliness as a Symptom of Our Times]." In: *Mistrzowie Psychologii wobec Wyzwań Współczesności*, edited by Z. B. Gaś, 17–51. Wydawnictwo Naukowe WSEI Innovatio Press.
- Satici, B., and M. Deniz. 2020. "External Shame, Loneliness, Psychological Distress, and Well-Being: Insights from the Turkish Adaptation of the Other as Shamer Scale-2." *Current Issues in Personality Psychology*, 8(2): 154–167. <https://doi.org/10.5114/cipp.2020.97421>.
- Sinic, C. A. 2021. "The Psychological Implications of Loneliness." In *The Bloomsbury Handbook of Solitude, Silence, and Loneliness*, edited by J. Stern, C. A. Sink, M. Walejko and W. Ho, 236–249. Bloomsbury Academic.
- StataCorp. 2023. *Stata 18 Structural Equation Modeling Reference Manual*. Stata Press.

- Stern, J. 2021. "Introduction: Personhood, Alone and Together—Solitude, Silence, and Loneliness in Context." In: *The Bloomsbury Handbook of Solitude, Silence, and Loneliness*, edited by J. Stern, C. A. Sink, M. Wąlejko and W. Ho, 1–9. Bloomsbury Academic.
- Śliwak, J., M. Brzeziński and D. Zarosińska. 2019. "Religijne Zmaganie się a Poczucie Osamotnienia u Podopiecznych Hospicjów [Religious Struggle and a Feeling of Loneliness in Hospice Patients]." *Kwartalnik Naukowy Fides et Ratio*, 38(2): 365–394. <https://doi.org/10.34766/fetr.v2i38.86>.
- Thomas, V. and M. Azmitia. 2019. "Motivation Matters: Development and Validation of the Motivation for Solitude Scale—Short Form (MSS-SF)." *Journal of Adolescence*, 70: 33–42.
- van Baarsen, B., T. A. Snijders, J. H. Smit and M. A. Van Duijn. 2001. "Lonely but Not Alone: Emotional Isolation and Social Isolation as Two Distinct Dimensions of Loneliness in Older People." *Educational and Psychological Measurement*, 61(1): 119–135. <https://doi.org/10.1177/00131640121971103>.
- Weinstein, N., H. Hansen and T. V. Nguyen. 2023. "Definitions of Solitude in Everyday Life." *Personality and Social Psychology Bulletin*, 49(12): 1663–1678. <https://doi.org/10.1177/01461672221115941>.
- Winnicott, D. W. 1958. "The Capacity to Be Alone." *The International Journal of Psychoanalysis*, 39: 416–420.

JACEK BORYS SOIŃSKI OFM – PhD (habilitated), Associate Professor in the Department of Philosophy and Dialogue, Faculty of Theology, Adam Mickiewicz University in Poznań. He specializes in pastoral psychology, philosophy of dialogue, and theology.

ALICJA JAJKO-SIWEK – PhD, Associate Professor in the Department of Econometrics, Poznań University of Economics and Business. Her research specializes in econometrics, statistical analysis, and machine learning, with a focus on population ageing and pension benefits.

ANNA WIERADZKA-PILARCZYK – PhD in Humanities, Assistant Professor in the Department of Philosophy and Dialogue, Faculty of Theology, Adam Mickiewicz University in Poznań. Author of the theory and scale for the study of religious identity (STR); she specializes in educational psychology, pastoral psychology, and psychoprophylaxis.