

Validation of the Polish version of the Functional Analytic Psychotherapy Intimacy Scale (FAPIS)

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Summary

Aims. FAP Intimacy Scale (FAPIS) is a self-reported measure allowing to assess the process of change in a client's intimate relating, specific to behavioral definition of intimacy. FAPIS consists of 14 questions with three subscales: Hidden Thoughts and Feelings, Expression of Positive Feelings, and Honesty and Genuineness. The aim of this study is to assess psychometric properties of the Polish version of this tool.

Material and methods. A total of 423 people (350 women and 70 men, others did not reveal gender) in the age of 18–55 completed online the set of self-reported measures. Confirmatory factor analysis and bivariate Pearson correlations were calculated.

Results. The three-factor internal structure of the tool was confirmed. All three scales of the instrument demonstrated very high internal consistency. The theoretical validity of the tool has been confirmed: the scales are significantly correlated with each other and with the overall score. FAPIS scales were associated with other measures of various aspects of intimacy or emotions experienced in relationships (e.g., anxiety, avoidance, closeness), as well as depression, and various aspects of interpersonal competence.

Conclusions. The Polish version of the FAPIS presents itself as a valuable tool for use in scientific research and therapeutic practice.

Key words: social skills, therapeutic alliance, Functional Analytic Psychotherapy

Introduction

Social connection is crucial to human health and well-being; loneliness or staying in hostile relationships may have severe adverse effects for mental and physical health, including mortality risk [1]. Intimacy has been proposed as a core component of social connection [2, 3] and as an important intervention target for enhancing both intra – and interpersonal functioning [4, 5].

Over the years, scientists of different theoretical backgrounds made attempts to define intimacy [6]. One of those attempts has been made by scholars working in the Contextual Behavioral Science paradigm (CBS [e.g., 2, 7])¹, focused specifically on the development of interpersonal relationships and intimacy – Functional Analytic Psychotherapy (FAP [12–14]). According to FAP, intimacy is a transdiagnostic concept [5]. From a behavioral-contextual viewpoint it develops over time as a result of many interactions in which one person engages in some interpersonally risky behavior (e.g., emotional disclosure, sharing secrets, expressing needs or appreciations) that was met with aversive consequences (e.g., invalidation, humiliation, rejection) in the past, and another person responds in a positive way (e.g., by expressing understanding, validating or reciprocating disclosure [15]). According to FAP intimacy is treated functionally rather than topographically – its definition focuses on the effects of specific interpersonal interactions in specific contexts instead of just how they look like. Consequently, this perspective is inherently idiographic – what may be an intimacy-enhancing interaction for one person, may be neutral or even decrease feeling of intimacy for another person. This conceptualization of intimacy is inclusive of diverse forms of relationships, encompassing not only romantic love, but also friendships, relationships between siblings, or other relatives, etc..

FAP focuses on observing, evoking and then naturally reinforcing in-session behaviors, so that the client can practice the repertoire of behaviors allowing them to initiate and maintain closeness [12, 13]. In order to support FAP therapists as well as researchers, a self-reported measure assessing the process of change in a client's intimate relating, specific to behavioral definitions of intimacy, the FAP Intimacy Scale (FAPIS; [16]) was developed. The scale is sensitive to change following an intervention enhancing closeness in romantic and non-romantic dyads [17]. It can also be used to measure intimacy in various clinical groups, such as individuals with obsessive-compulsive disorder [18]. Before answering questions, participants are instructed to select a person with whom they share the strongest bond, to specify the nature of this relationship, and to indicate the duration of the relationship. The FAPIS consists of 14 questions with three subscales: Hidden Thoughts and Feelings,

¹ CBS is rooted in B. F. Skinner's radical behaviorism. Its goal is to create a prosocial science that can predict and shape human behavior using as few concepts as possible, encompassing a wide range of phenomena while maintaining consistency across different levels of analysis [8]. Despite the common misconception of radical behaviorism as "black box psychology" [9], phenomena such as emotions, self-awareness, or interpersonal relationships are very much a subject of interest and study of radical behaviorists and contextual behavioral scientists (e.g., [10, 11]). CBS embraces many different realms of human functioning at the individual and group level, e.g., engaging in values-based behavior and coping with difficult thoughts, feelings, and sensations [8].

Expression of Positive Feelings, and Honesty and Genuineness [16]. Each subscale focuses on the following categories of behaviors: willingness to disclose vulnerable, personal thoughts and feelings; open expression of positive emotions; and behaving in an authentic, genuine way. FAPIS subscales correlate positively with satisfaction in one's romantic relationship, interpersonal competency, degree of received social support, and negatively with anxiety and avoidance in close relationships [16]. Also, the FAPIS negatively correlates with depression [18]. Regarding personality traits, the FAPIS and its subscales positively correlate with extraversion, agreeableness, and conscientiousness.

Despite a vast number of self-reported measurements of intimacy available in Poland, an adequate questionnaire capturing the behavioral conceptualization of intimacy is still lacking. Therefore, the aim of this study is to assess psychometric properties of the Polish version of FAPIS.

Materials and methods

Sample

The participants were recruited by the university research panel, the only exclusion criteria were being less than 18 years old. A total of 423 people completed the study: 350 women (82.7%) and 70 men (16.5%; 3 people did not reveal information about their gender) with an age range of 20–55 ($M = 30.24$; $SD = 8.36$). Most of them had higher education ($N = 177$; 41.8%), 30.0% ($N = 127$) finished bachelor studies, and 27.2% ($N = 115$) finished high school. All other participants ($N = 4$; 0.9%) had a primary or vocational educational level.

A total of 292 people (69.0%) declared being currently engaged in a stable partnership, while 131 (31.0%) declared being single. Participants reported that while responding to FAPIS items they referred mostly to romantic partnerships ($N = 204$; 48.2%), followed by friend relationships ($N = 125$; 29.6%), parent relationships ($N = 54$; 12.8%), and sibling relationships ($N = 17$; 4.0%).

All of the participants signed an informed consent. The studies were conducted following the Declaration of Helsinki and received a positive opinion from the local Ethics Committee.

Procedure

The study was conducted online between July–October 2021. The participants filled in a set of self-report questionnaires: a short demographic questionnaire, the Polish version of FAPIS, and measures aiming at verifying FAPIS validity (described below).

Measures

Functional Analytic Psychotherapy Intimacy Scale (FAPIS [16]) was translated to Polish by three independent translators (two of them are authors of this publication),

practitioners in third wave cognitive-behavioral approaches. Those three translations were presented to three independent judges – scientists and practitioners in the area of behavioral science. Final translations were chosen based on the opinions of judges. The original instruction and response scale were kept (1 = not at all, 2 = a little, 4 = a lot and 7 = completely) [16].

Multidimensional Experiential Avoidance Questionnaire-30 (MEAQ-30 [19, 20]) measures different aspects of psychological flexibility (including six scales: behavioral avoidance, distress aversion, procrastination, distraction and suppression, repression and denial, and distress endurance) via 30 questions rated on a 6-point scale (1 – I strongly disagree, 6 – I strongly agree).

Ten-Item Personality Inventory (TIPI [21, 22]) consists of 10 items rated on a 7-point scale (1 – strongly disagree to 7 – strongly agree) and measures the characteristics of the Big Five personality traits (emotional stability, extraversion, conscientiousness, openness to experience, and agreeableness).

Patient Health Questionnaire (PHQ-9 [23, 24]) measures the symptoms of depression and consists of 9 questions, assessed on a 0–3 scale depending on the frequency of occurrence of a given symptom in the last two weeks.

DeJong Gierveld Loneliness Scale (DGLS [25, 26]) measures the sense of loneliness and consists of two dimensions: emotional and social. The respondents rate 11 statements using a 5-point scale (1 – definitely yes, 7 – definitely no).

Unidimensional Relationship Closeness Scale (URCS [27, 28]) was used to measure closeness in a relationship. The respondents rated 12 statements using a 7-point scale (1 – I strongly disagree, 7 – I strongly agree).

Experiences in Close relationships (ECR [29, 30]) was used to measure the experiences in relationships with relatives on two dimensions: anxiety and avoidance. The respondents rate 16 statements using a 7-point scale (1 – I strongly disagree, 7 – I strongly agree).

Interpersonal Competence Questionnaire (ICQ-R [31, 32]) measures interpersonal competences in the area of initiation of interactions and relationships, assertion of personal interests, self-disclosure of personal information, emotional support of others, and management of interpersonal conflicts, and consists of 40 questions, rated on a 5-point scale.

The reliability of the scales (McDonald's omega and, in the case of two-item scales if TIPI – Cronbach's alpha) is presented in Table 1.

Statistical analyses

Confirmatory factor analysis (CFA) with the use of Maximum Likelihood Robust (MLR [3]) estimator was used to check the three-factor internal structure of FAPIS items. Model fit was evaluated based on the chi-square statistic (χ^2), robust RMSEA, robust CFI, robust TLI, robust SRMR, and according to the criteria proposed by Hu and Bentler [34]: RMSEA \leq 0.08; SRMR \leq 0.08; CFI \geq 0.90; TLI \geq 0.95. Then, to provide information about the validity of the scale, Pearson's r correlations between FAPIS as well as its subscales and other measures were calculated. All the analyses were conducted with the use of SPSS v. 25, and R laavan package [35, 36].

Results

The three-factor model exhibited a satisfactory fit: $\chi^2(74) = 200.778$; $p < 0.001$; RMSEA = 0.074 (95% CI: 0.062–0.086); SRMR = 0.044; CFI = 0.950; TLI = 0.938. Standardized factor loading estimates are shown in Figure 1.

Corrected item-total correlations were high for all the items (Table A in Appendix) and the internal consistency of scale and subscales was definitely satisfactory (reliability coefficients between 0.87 and 0.91; Table 1).

The Pearson's r correlations were calculated between the three FAPIS subscales and its total score showing moderate and strong relationships between subscales and the whole scale (from 0.30 to 0.88; Table 1). The strongest correlations (from moderate to strong) were found between all three FAPIS subscales and its total score and anxiety and avoidance in relationship scales (negative), as well as the total score of *Unidimensional Relationship Closeness Scale* (positive). Weak or moderate positive relationships were found between FAPIS subscales and total score and personality traits. The correlations with the level of depressive symptoms were moderate and negative. Correlations with different aspects of interpersonal competency were weak or moderate and positive. Finally, relatively weaker yet positive relationships were found for the scales and total score of *DeJong Gierveld Loneliness Scale*. *Multidimensional Experiential Avoidance Questionnaire* scales correlated more strongly with Honesty and Genuineness as well as FAPIS total score than with Hidden Thoughts and Feelings or Expression of Positive Feelings. The directions of the relationships were consistent with the theoretical expectations and support the validity of the measure. The results are presented in Table 1.

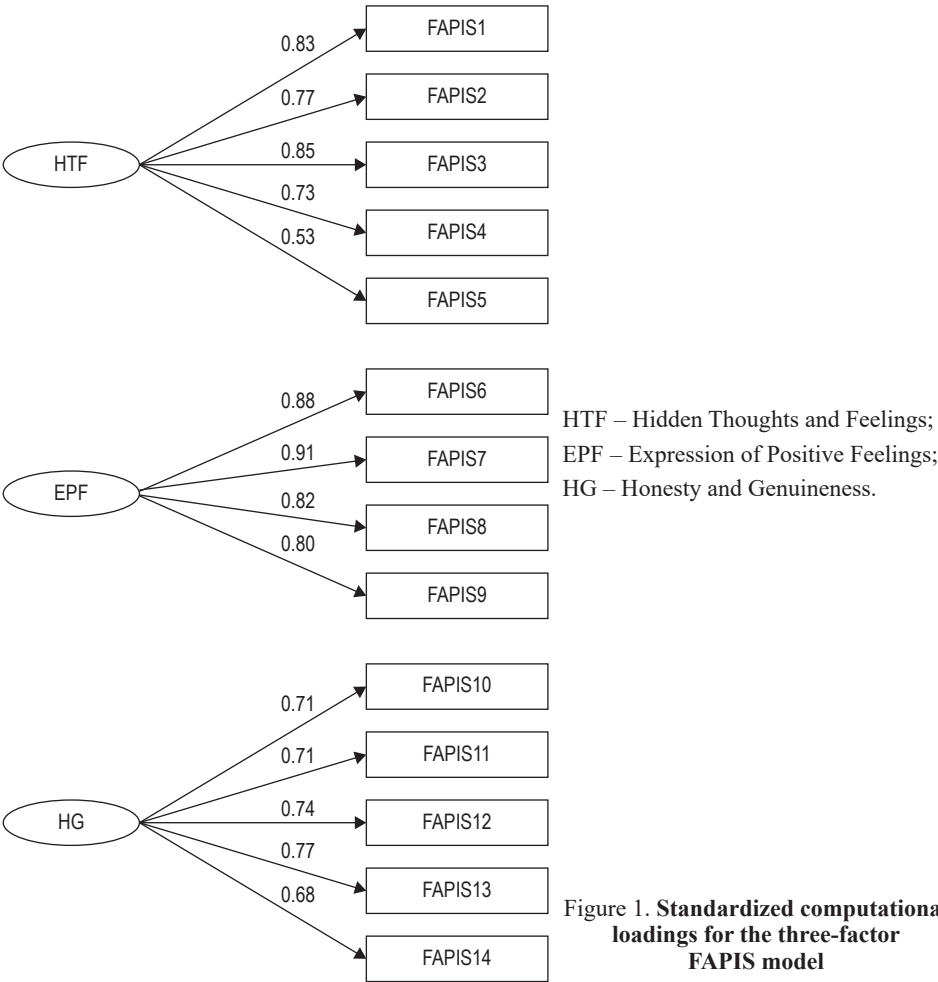


Tabela 1. **Descriptive statistics and correlations between the FAPIS total score and scales and other measures**

Scales	ω/α	<i>M</i>	<i>SD</i>	Skewness	<i>SESk</i>	Kurtosis	<i>SEKt</i>	FAPIS_ HTF	FAPIS_ EPF	FAPIS_ HG	FAPIS total
FAPIS-HTF	0.870	23.35	6.27	-0.94	0.12	0.47	0.24		0.644"	0.495"	0.875"
FAPIS-EPF	0.910	19.13	5.11	-1.07	0.12	0.89	0.24			0.337"	0.774"
FAPIS-HG	0.869	20.95	6.77	-0.57	0.12	0.02	0.24				0.786"
FAPIS total	0.906	63.43	14.76	-0.60	0.12	0.06	0.24				
MEAQ-BA	0.668	17.56	3.96	-0.07	0.12	0.32	0.24	-0.098"	-0.134"	-0.166"	-0.164"
MEAQ-DA	0.764	16.74	4.98	0.05	0.12	-0.15	0.24	-0.143"	-0.126"	-0.258"	-0.223"

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MEAQ-PR	0.784	16.81	4.81	-0.09	0.12	-0.59	0.24	-0.146"	-0.120'	-0.228"	-0.208"
MEAQ-DS	0.742	16.91	4.71	-0.04	0.12	0.10	0.24	-0.156"	-0.109'	-0.269"	-0.228"
MEAQ-RD	0.734	13.21	4.46	0.72	0.12	0.69	0.24	-0.286"	-0.175"	-0.378"	-0.355"
MEAQ-DE	0.776	21.36	4.33	-0.11	0.12	-0.34	0.24	0.236"	0.227"	0.230"	0.284"
TIPI-EX	0.682	5.08	1.55	-0.68	0.12	-0.44	0.24	0.251"	0.283"	0.292"	0.338"
TIPI-AG	0.543	5.38	1.22	-0.52	0.12	-0.57	0.24	0.222"	0.231"	0.255"	0.291"
TIPI-CO	0.741	5.11	1.52	-0.66	0.12	-0.38	0.24	0.169"	0.183"	0.225"	0.239"
TIPI-ES	0.719	3.87	1.66	0.16	0.12	-0.95	0.24	0.112'	0.152"	0.235"	0.208"
TIPI-OP	0.377	5.17	1.21	-0.46	0.12	0.24	0.24	0.212"	0.163"	0.298"	0.283"
PHQ	0.894	7.94	5.56	0.87	0.12	0.46	0.24	-0.261"	-0.149"	-0.442"	-0.365"
DGLS-E	0.873	4.60	1.79	-1.15	0.12	0.18	0.24	0.187"	0.220"	0.192"	0.244"
DGLS-S	0.839	4.04	1.25	-1.32	0.12	10.09	0.24	0.186"	0.164"	0.250"	0.250"
DGLS total	0.819	8.64	2.66	-1.09	0.12	0.27	0.24	0.214"	0.226"	0.247"	0.282"
ECR-AN	0.911	27.69	11.56	0.21	0.12	-0.65	0.24	-0.288"	-0.263"	-0.433"	-0.412"
ECR-AV	0.886	19.83	8.49	0.96	0.12	0.83	0.24	-0.593"	-0.506"	-0.484"	-0.649"
URCS total	0.926	64.14	11.36	-1.06	0.12	1.38	0.24	0.485"	0.584"	0.346"	0.567"
ICQ-I	0.889	3.58	0.83	-0.57	0.12	0.09	0.24	0.223"	0.233"	0.160"	0.249"
ICQ-E	0.848	3.97	0.60	-0.79	0.12	1.42	0.24	0.308"	0.297"	0.154"	0.305"
ICQ-A	0.897	3.68	0.67	-0.41	0.12	0.17	0.24	0.293"	0.320"	0.203"	0.329"
ICQ-S	0.868	3.31	0.81	-0.36	0.12	-0.26	0.24	0.336"	0.267"	0.261"	0.355"
ICQ-C	0.774	3.56	0.58	-0.42	0.12	1.19	0.24	0.241"	0.332"	0.118"	0.272"

M – mean; SD – standard deviation; SE_{sk} – standard error of skewness; SE_{kt} – standard error of kurtosis; ω – McDonald's omega; α – Cronbach's alfa; FAPIS-HTF – Hidden Thoughts and Feelings; FAPIS-EPF – Expression of Positive Feelings; FAPIS-HG – Honesty and Genuineness; FAPIS total – FAPIS total score; MEAQ-BA – Behavioral Avoidance; MEAQ-DA – Distress Aversion; MEAQ-PR – Procrastination; MEAQ-DS – Distraction and Suppression; MEAQ-RD – Repression and Denial; MEAQ-DE – Distress Endurance; TIPI-EX – Extraversion; TIPI-AG – Agreeableness; TIPI-CO – Conscientiousness; TIPI-ES – Emotional Stability; TIPI-OP – Openness; PHQ – Patient Health Questionnaire score; DGLS-E – Emotional Loneliness; DGLS-S – Social Loneliness; DGLS total – DGLS total score; ECR-AN – Anxiety in Relationship; ECR-AV – Avoidance in Relationship; URCS total – URCS total score; ICQ-I – Initiation of Interactions and Relationships; ICQ-E – Emotional Support of Others; ICQ-A – Assertion of Personal Interests; ICQ-S – Self-disclosure of Personal Information; ICQ-C – Management of Interpersonal Conflicts. * $p < 0.05$; ** $p < 0.01$

Discussion

The conducted study allowed for the validation of a Polish adaptation of the FAPIS questionnaire, which exhibits very good psychometric properties. The results

of the factor analysis confirmed the three-factor internal structure of the tool, similarly to the original [16, 18] and Spanish [37] versions. All three scales of the instrument demonstrate very high reliability (internal consistency).

The construct validity of the tool has been confirmed. The scales are significantly correlated with each other and with the overall score. Consistent with theoretical assumptions and the results of previous studies [16, 37], the FAPIS subscales were found to be significantly associated with other measures of various aspects of intimacy or emotions experienced in relationships (e.g., anxiety, avoidance, closeness). It can be expected that behavioral indicators of intimacy will be related to internal experiences of comfort associated with interpersonal closeness. At the same time, from the perspective of radical behaviorism, different behavioral mechanisms may be responsible for these two categories – observable behaviors related to intimacy are primarily shaped through operant conditioning, while emotions and other internal experiences are shaped through both operant and classical conditioning [7]. The goal of FAP is to shape behavioral indicators of intimacy, though the positive effects of this therapy also extend to emotional experiences within relationships [38].

The lack of very high correlations suggests that the FAPIS captures intimacy in a different way than already available tools in the Polish language. Specifically, the self-reported domains of the FAPIS reflect behavioral classes that are amenable to targeting and change in psychotherapy, and may serve as effective markers of change in psychotherapies that target these mechanisms. While the FAPIS was designed with FAP in mind, a number of therapeutic approaches have been designed to evoke and rehearse behaviors that result in greater intimacy (e.g., accelerated experiential-dynamic psychotherapy (AEDP) [39]). This may offer a useful tool in exploring how effective FAP is in a Polish context, particularly as contextual behavioral interventions gain popularity.

Particular attention should be paid to the relationship between the FAPIS scales and the level of depressive symptoms (moderate and negative, similar to the study by Singh et al. [18]), as well as various aspects of interpersonal competence (moderate and positive), as they indicate the functional relationship between the level of behaviors that build and maintain intimacy and the level of mental and physical health. Loneliness and subsequent harms to mental health are multifactorial, with interpersonal behaviors reflecting important differences in sensitivity to internal or external contingencies (e.g., [40]).

Limitations of the conducted study include a non-representative sample with a significant female majority. Although the original version of the tool does not assume the use of norms for interpreting results (as it is used for scientific research and in clinical practice for intra-individual comparisons) [16, 18], it should be noted that the sample was comprised primarily of women, these findings may not be generalized to men. Future studies should ensure a more comparable number of women and men to replicate the results we obtained.

The study did not include a measurement of temporal stability, although the results obtained by Leonard et al. [16] suggest that intimacy assessed by FAPIS, or some of its scales (namely Hidden Thoughts and Feelings), may be sensitive to the ever-

changing context of relationships. For these reasons, tracking responses over time in response to an interpersonal psychotherapy such as FAP may offer important support for therapeutic work. Replicating this result, especially in a different cultural context, would be valuable. In the future, it is worth comparing FAPIS results obtained in different samples, including the general population versus clinical samples, especially those with diagnosed personality disorders, which by definition, are characterized by difficulties in interpersonal relationships.

Conclusions

The Polish version of FAPIS presents itself as a valuable tool for use in scientific research as well as therapeutic practice. The reliability and validity of scales were confirmed. It also contributes to the growing collection of Polish-language psychometric tools within the contextual-behavioral paradigm.

Data Availability Statement: *The study and analyses were not preregistered. Data and codes are available at DOI 10.17605/OSF.IO/YJVK6.*

Conflict of interest: *Authors declare no conflict of interest.*

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Appendix

Table A. **Item-total correlations**

Items	Item-total-correlations
1. I showed my true feelings and was completely natural with this person.	0.758
2. I was comfortable discussing significant problems with this person.	0.737
3. I felt comfortable telling this person things that I do not tell other people.	0.765
4. I trusted this person with my deepest thoughts and feelings.	0.685
5. I revealed to this person what I feel are my shortcomings.	0.467
6. I expressed loving, caring feelings toward this person.	0.631
7. I was open and loving with this person.	0.688
8. I attempted to get closer to this person.	0.594
9. I expressed my feelings about this person directly to him/her.	0.676
10. I kept very personal information to myself and did not share it with this person.	0.577
11. When I talked to this person, I stuck to safe topics.	0.577
12. There were times when I held back information from this person.	0.577
13. I hid my emotions from this person.	0.659
14. At times I kept opinions to myself because I was afraid of how this person might react.	0.568