

TEMIR - A TEST TO MEASURE EXISTENTIAL MOTIVATIONS IN INTERPERSONAL RELATIONSHIPS: FACTORIAL STRUCTURE, RELIABILITY AND VALIDITY

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The aim of this study was to develop a new measure of existential fulfilment in interpersonal relationships, operationalizing Längle's theory of the four existential fundamental motivations. Using expert procedures, we developed a pool of 80 items and investigated its structure in a Russian-speaking sample (N=634). We used exploratory factor analysis and hierarchical cluster analysis to select 3 indicator items for each of the 3 prerequisites of each of the 4 fundamental existential motivations. The confirmatory factor analysis supported a hierarchical structure of the 36-item set with 12 first-order factors and 4 second-order factors. Each of the 12 subscales and the 4 main scales showed acceptable reliability (Cronbach's alphas > 0.80). The scales of the questionnaire allowed to differentiate between self-reported "successful" and "unsuccessful" relationships, and exhibited statistically significant correlations with two measures of general existential fulfilment, i.e. Existence Scale (Längle, Orgler & Kundi 2000) and Test of Existential Motivations (Eckhardt 2001). Path analysis (conducted using Mplus 7.11 software) indicated that fulfilment of the 3rd and the 4th fundamental motivations (Authenticity and Meaning, respectively) in relationships was the most essential contribution to general existential fulfilment. We also investigated the differences in the experience of relationships across gender and relationship types (i.e., "free" relationship, unregistered marriage, official marriage). The gender-results indicated that females reported more positive experiences with relationship. Personal commitment in relationship (according to their types) was a good predictor of the perceived fulfilment in relationship, stronger than the gender variable. We propose the use of the presented Test of Existential Motivations in Interpersonal Relationships (TEMIR) as a new Russian-language research instrument and discuss potential future research avenues.

KEY WORDS: authenticity, fundamental existential motivations, interpersonal relationships, meaning, trust, value of life

TEMIR – EIN TEST ZUR MESSUNG EXISTENTIELLER MOTIVATIONEN IN ZWISCHENMENSCHLICHEN BEZIEHUNGEN: FAKTORIELLE STRUKTUR, ZUVERLÄSSIGKEIT, VALIDITÄT

Das Ziel der Studie war die Entwicklung eines neuen Maßes für existentielle Erfüllung in zwischenmenschlichen Beziehungen auf der Basis der Theorie der vier existentiellen Grundmotivationen von Längle, die dafür operationalisiert wurden. Unter Verwendung von Expertenurteilen formulierten wir 80 Items und untersuchten ihre Struktur in einer Russischsprachigen Stichprobe (N=634). Unter Anwendung einer exploratorischen Faktorenanalyse und einer hierarchischen Clusteranalyse fanden wir 3 Indikatoritems für jede der drei Voraussetzungen einer jeden der 4 Grundmotivationen. Die konfirmatorische Faktorenanalyse bestätigte eine hierarchische Struktur der 36 finalen Items mit 12 Faktoren ersten Ranges und 4 Faktoren zweiten Ranges. Jede der 12 Subskalen und der 4 Skalen wiesen akzeptable Reliabilitäten auf (Cronbachs alpha > 0.80). Die Skalen des Fragebogens erlaubten eine Differenzierung der in der Selbsteinschätzung als „erfolgreich“ und als „erfolglos“ bezeichneten Beziehungen und wiesen statistisch signifikante Korrelationen mit zwei Maßen existentieller Erfüllung auf, nämlich der Existenz Skala (Längle, Orgler & Kundi 2000) und des Tests für Existentielle Motivation (Eckhardt 2001). Die Pfad-Analyse (durchgeführt mit Mplus 7.11 software) zeigte auf, dass die Erfüllung der dritten und vierten Grundmotivation (Authentizität und Sinn) in Beziehungen den stärksten Beitrag für die allgemeine existentielle Erfüllung lieferte. Wir untersuchten auch die Geschlechts-Unterschiede in den Beziehungserfahrungen sowie Beziehungstypen (z.B. „freie“ Beziehung, die nicht eingetragene Partnerschaft, die offizielle Ehe). Die Resultate zeigten, dass Frauen vermehrt von positiven Beziehungserfahrungen berichten. Persönlichen Hingabe in der Beziehung (entsprechend dem Beziehungstypus) war im Vergleich zum Geschlecht ein stärkerer Prädiktor für die wahrgenommene Erfüllung. Wir empfehlen die Anwendung des vorliegenden Tests für Existentielle Motivation in zwischenmenschlichen Beziehungen (TEMIR) als neues Russischsprachiges Forschungsinstrument und erörtern potentielle zukünftige Forschungsgebiete.

SCHLÜSSELWÖRTER: Authentizität, existentielle Grundmotivationen, zwischenmenschliche Beziehungen, Sinn, Vertrauen, Wert des Lebens

INTRODUCTION

Recently, major efforts in existential analysis research have been made to create psychometric tools to supplement qualitative phenomenological studies with quantitative data. In Alfred Längle's school of thought, psychometric tools were developed to be used both in research and in counselling practice. The Existence Scale (ESK) developed by

Längle and Orgler (Längle, Orgler & Kundi 2000) based on Viktor Frankl's theory was designed to "assess existential fulfilment as it is subjectively experienced by a participant" (Krivtsova, Längle & Orgler 2009, 142). The Test of Existential Motivations (TEM) created by Längle and Eckhardt (Eckhardt 2001) is based on Längle's concept of the four fundamental existential motivations. It assesses integral factors of personal existence or "an integral subjective re-

presentation of the quality of one's life" (Koryakina 2010, 140). Currently, these questionnaires are being validated and standardized in Russian-speaking samples (Mainina 2009; Koryakina 2010, 2011; Petrova 2010).

Our aim was to develop an original psychometric instrument to assess the degree of fulfilment of the four fundamental existential motivations in close interpersonal relationships. In other words, we tried to move from assessing the integral factors of personal existential fulfillment to assessing the existential fulfillment in a specific domain of life, namely, in close interpersonal relationships. In our opinion, The Test of Existential Motivations in Interpersonal Relationships (TEMIR) can supplement the existing ESK and TEM, both in research and in counselling. In the present paper we report the validation steps and the main research findings we obtained during the validation process of TEMIR.

THEORETICAL BACKGROUND

One of the most naïve and at the same time the deepest questions of human life and psychology as a science is: Why do people start close relationships? What keeps them together? According to psychoanalytical theories, people tend to build relationships mainly to satisfy some basic needs of soul and body, to compensate for deficits, out of unconscious childhood complexes, inferiority feelings, or to achieve pragmatic aims. According to the existential analytical approach, humans are not created for living alone: relationships form the very essence of existence. People relate to each other mainly because their personal existence can only be actualized in close interpersonal relationships. Paraphrasing Martin Buber (Buber 2010), Frankl wrote: "Where id is, ego should be; but the ego can become an ego only through a Thou" (Frankl 1988, 12). In close interpersonal relationships, it happens that an encounter helps both partners to experience a more authentic existence. In other words, in a close relationship with another person, I may become more of who I really am, in my essence, and move to a personal level of existence. Similarly, the other person may become more him or herself, thanks to our encounter.

Using Längle's theory of existential fundamental motivations (Längle 2002, 2003, 2006), we can describe the motivational aspects of close interpersonal relationships that are needed in order for one to be fully present as a person in a relationship and to experience fulfilment. In his theory, Längle describes existential fundamental motivations (FM), four basic conditions for fulfilled existence that are involved in every motivational process. He proposes to phrase them as fundamental questions of life: "I am – Can I be?" (1st FM), "I am alive – Do I like this fact?" (2nd FM), "I am myself – May I be like this? Do I feel free to be like this?" (3rd FM), "I am here – For what purpose?" (4th FM) (Längle 2003). By finding positive answers to these questions, individuals experience trust, value of life, authenticity, and meaning. Längle (2002, 2003, 2006) describes three prerequisites for the fulfilment of each fundamental motivation. We applied his theory to the domain of close interpersonal relationships (Table 1).

The first existential fundamental motivation in a relationship is the need to trust the other person. For this, the relationship

must offer *space, protection* and *support*. Space is set by the relationship framework (i.e., conditions and rules accepted by both partners as the structure of their relationship). These could be financial and housing conditions, rights and duties, assignment of roles etc. Sense of protection in a relationship results from being accepted by one's partner and from the confidence that he or she is always on one's side, whatever may happen. Partner's fidelity and reliability lead to a sense of support. Absence of a supportive structure in a close relationship expressed as lack of either space, protection, and/or support may lead to a sense of insecurity.

The second fundamental existential motivation as it is experienced in an interpersonal relationship is the need to enjoy the relationship and the capacity to experience the value of life through it. *Relatedness* or the experience of community, time spent together, and shared *closeness* create conditions for partners to be emotionally open and for their relationship to be filled with mutual feelings and shared values.

The third fundamental existential motivation is the need to be authentic when one is together with one's partner, or the need to be oneself in a relationship. To experience this, one needs *attention, justice, and appreciation* from the partner. On one hand, in such a relationship partners share their intimate feelings and experience emotional closeness, and, on the other hand, each partner is allowed to maintain his or her own individuality and autonomy. This "closeness at a distance", when there is mutual respect of each other's interests and actions, forms a perfect environment for authenticity and personal growth of both partners.

The fourth fundamental existential motivation is the need for a meaningful collaboration with the partner. A *field of common activity, a structural context* of the future that includes both partners, their common vision of values and their *future together* can lead to common goals, projects and aims. This mutually shared horizon of becoming keeps partners together and creates a common meaning perspective and a common world, in which partners need each other because together they can do better than on their own.

This structure of four fundamental motivations, each of which has three prerequisites (Längle 2002, 2003, 2006), resulting in 12 facets of existential fulfilment served as the theoretical basis we used to develop the questionnaire (Table 1). Apart from developing a measurement instrument, the

FM	Content of motivation	Prerequisites for realization of motivation		
1st FM	Trust in relationships	Space	Protection	Support
2nd FM	Value of life in relationships	Relatedness	Time	Closeness
3rd FM	Authenticity in relationships	Attention	Justice	Appreciation
4th FM	Meaning of relationships	Field of common Activity	Structural Context	Common Future

Table 1: The four fundamental existential motivations in close interpersonal relationships and their prerequisites (based on Längle 2002).

secondary aim of our study was to see whether the theoretical structure of the four fundamental motivations would fit with the empirical data for the 12 facets of existential fulfilment (prerequisites of fundamental motivations).

METHODS

Sample

The study sample included 634 respondents, 241 males (38%) and 393 females (62%), with an age range between 15 and 60 ($M = 23.7$, $SD = 21.4$). 68% of the sample ($N = 432$) were volunteers invited to complete a survey on an advertisement web portal. Additionally, 32% of the sample ($N = 202$) was collected via snowball recruitment approach.

The respondents were asked to answer the questionnaire in the context of a close relationship with a particular person of the opposite sex. 41% of respondents ($N = 260$) indicated that they were in a „free“ relationship (a relationship without obligations, when partners do not live together), 26% ($N = 165$) were in a “civil marriage” (cohabitation; a long-term relationship not registered officially), 22% ($N = 139$) were officially married, and 11% ($N = 70$) indicated “other” describing their relationship.

Instruments

In developing the questionnaire, we started by formulating a number of items that would reflect the presence of each of the three prerequisites for each of the four fundamental motivation, aiming to achieve a questionnaire with 12 subscales (facets) that we expected to form four secondary scales. The list of subscales and sample items that were retained in the final version of TEMIR are presented in Table 2. Our strategy was to achieve a sufficient representation of each of the 12 facets.

The items were formulated independently by the first two authors and then reviewed together with two other content experts with a degree in existential analytic counselling, and in a focus group with M.Sc. students studying existential analysis. The final item pool included 80 items, between 5 and 7 items per each of the 12 theoretical facets. Twenty-five items were reverse-scored. The respondents were instructed to rate each item on a 6-point scale (see Appendix). Apart from TEMIR, respondents in the online sample had the option to complete ESK (Länge, Orgler & Kundi 2000; Russian version by Mainina 2009) and TEM (Eckhard 2001; Russian version by Koryakina 2010). They were also asked to evaluate the quality of the relationship they had in mind while completing TEMIR by choosing one of the two options:

1. “Our relationship was successful. There was depth in it, I feel satisfaction and confidence that this relationship was good and right for me.”
2. “I don’t think that our relationship was successful. I experience it as not very rich or not fulfilling me for some reason, but still important to me.”

We used ESK and TEM to evaluate the convergent validity of TEMIR and self-report relationship quality index to evaluate its face validity.

1st Fundamental motivation (Trust in relationships)	Support (Tsup): Our relationship has a firm basis
	Protection (Tprot): I feel protected thanks to this relationship
	Space (Tsp): I do not have enough personal space in this relationship*
2nd Fundamental motivation (Value of life in relationships)	Relatedness (Vrel): I can feel joys and sorrows of my partner
	Time (Vtime): The more time we spend together, the more connected we feel
	Closeness (Vcl): I feel warmth in our relationship
3rd Fundamental motivation (Authenticity in relationships)	Attention (Aatt): I feel that my partner often offends me*
	Justice (Ajust): In our relationship my partner and I have equal rights
	Appreciation (Aappr): My partner appreciates my uniqueness and individuality
4th Fundamental motivation (Meaning of relationships)	Field of common Activity (Mfield): The horizon of my life widens thanks to this relationship
	Structural Context (Mstruct): I find reference points in my life thanks to this relationship
	Common Future (Mfut): I feel that something really valuable may result from our relationship

Table 2: Sample items of the TEMIR questionnaire
Note: * indicates reverse-scored items

Procedure

All the respondents completed the questionnaire on a volunteer basis. Online respondents completed the questionnaire anonymously, respondents from the other sample used nicknames.

RESULTS AND DISCUSSION

Exploratory analyses

The aim of the exploratory analyses was to establish a measurement model of the 12 primary facets of existential fulfilment. We started by investigating the structure of the questionnaire using exploratory factor analysis in Mplus 7.2 with oblique Geomin rotation. We investigated models with 4 to 7 factors (a larger number of dimensions led to convergence difficulties). However, the empirical structure did not quite fit the proposed theoretical model. For instance, in a 4-factor structure, only 37 items loaded on theoretically predicted factors.

Exploratory factor analysis turned out to be not an optimal method, because of the large size of the item pool and its theoretically complex structure (hierarchical structure with 12 first-order and 4 second-order factors, as well as the presence of reverse-scored items resulting in “method factors”), as well as potential presence of some items that did not function well. In such situations, hierarchical clustering can be used to identify distinct parcels of closely related items with theoretically substantive meaning (Revelle 1979).

We applied hierarchical cluster analysis using Ward’s method with Squared Euclidean distance metric to 80 items stan-

standardized into z-scores by variable. The reverse-scored items were inverted. One item (73: “my partner is a continuation of myself”) fell into a separate cluster and was excluded. Using the hierarchical structure (shown on Figure 1), we identified 12 relatively homogeneous and substantively meaningful parcels of items corresponding to the 12 theoretical subscales.

Then we performed exploratory factor analysis to ensure unidimensionality of each parcel and to select 3 items for each of the 12 subscales of TEMIR. The item selection strategy was to select items with sufficiently high loadings to ensure acceptable reliability of subscales and, at the same time, to exclude items that are too similar, in order to achieve a breadth of meaning and ensure good construct validity.

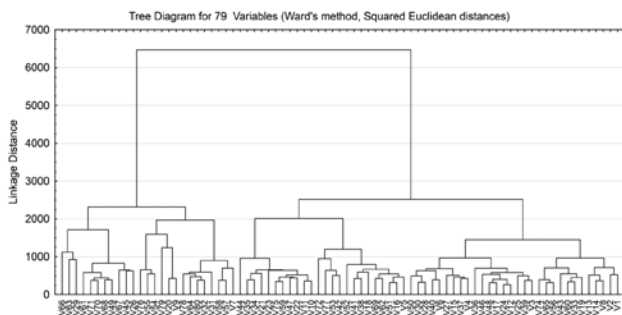


Figure 1: Hierarchical structure of the 79-item pool (N=634)

Confirmatory factor analysis

Based on exploratory analyses, we selected a set of 36 items grouped into 12 parcels in the hierarchical cluster model. We expected these items to form 12 distinct factors reflecting the facets of existential fulfilment (3 indicators per factor, as recommended by methodologists of confirmatory factor analysis – see Byrne 2012). We used confirmatory factor analysis (Mplus 7.2 software package with MLM estimator robust to distribution non-normality) to test the structure of the questionnaire. We relied on $CFI > 0.95$ and $RMSEA < 0.05$ as criteria of a good fit, and $CFI > 0.90$ and $RMSEA < 0.08$ as criteria of an acceptable fit of the model to the data (Byrne 2012).

First, we fit a first-order measurement model (12 correlated factors with 3 indicators per factor). Using modification indices, we found three items with pronounced cross-loadings ($\lambda > 0.30$) and replaced them with other items capturing the same facets from the item pool. The resulting 12-factor model (model 1) did not include any cross-loadings or error covariances and showed a good fit to the data (see Table 3). There were no pronounced outliers among the modification indices, suggesting no need for introducing additional parameters (such as cross-loadings or correlated errors) into the model. The values of the fit indices ($RMSEA < 0.05$, $CFI > 0.95$) indicated a good fit of the model. All the standardized factor loadings were significant and high (in the 0.71-0.92 range).

Based on the measurement model, we investigated the second-order structure. We tested two models, a theory-based model with 4 second-order factors corresponding to the 4 fundamental motivations with 3 first-order factor indicators of each secondary factor (model 3), and an alternative model with a single second-order factor corresponding to existential fulfilment in relationships with 12 first-order indicators

(model 2). As we expected, a single-factor second-order model exhibited a worse fit to the data. A theory-based 4-factor model fit the data better, and the fit indices were within the acceptable range ($RMSEA < 0.06$, $CFI > 0.90$). Based on the modification indices, we added a covariance between two components of the fourth fundamental motivation, reflecting high similarity between the Field of common activity and Structural context subfactors. The resulting model (model 4) fit the data better. The strongest modification indices for the second-order structure concerned cross-loading the “Closeness” (Vcl) factor on the second-order factors corresponding to the 1st and 3rd fundamental motivations, suggesting that Closeness is the most fundamental aspect of a relationship. However, the addition of these parameters led to convergence problems and we kept the more simple structure of the questionnaire, which is also in line with Längle’s theory. The final model (model 4) is presented on Figure 2.

Model	χ^2 (df)	SCF	CFI	RMSEA (90% confidence interval)	SRMR
1. Measurement model (12 first-order factors)	1228.28 (528)	1.479	0.949	0.046 (0.042-0.049)	0.037
2. 1-factor second-order	2015.94 (582)	1.477	0.895	0.062 (0.059-0.065)	0.057
3. 4-factor second-order	1750.74 (576)	1.477	0.914	0.057 (0.054-0.060)	0.051
4. 4-factor second-order with covariance	1595.53 (575)	1.476	0.925	0.053 (0.050-0.056)	0.049

Table 3: Fit indices for the confirmatory models

Note: SCF = scaling correction factor, CFI = comparative fit index, RMSEA = root mean square error of approximation, SRMR = standardized root of mean residual.

Reliability analysis

Based on the CFA results, we inverted the reverse-scored items and calculated sum scores for the 12 subscales, 4 scales, and the total score of TEMIR. The descriptive statistics for the resulting sum scores are presented in Table 4. All the distributions on the scales were right-skewed (skewness ranged from -1.51 to -0.53), suggesting that most respondents described a healthy relationship.

All the correlations between the 12 subscales were significant (in the 0.37-0.87 range). The correlations between the 4 scales were high (ranged between 0.74 and 0.86) and significant. This suggests that in a healthy relationship all four fundamental existential motivations tend to be fulfilled, whereas in a problematic relationship the problems tend to concern several fundamental motivations at once.

To evaluate the reliability of the subscales, scales, and the total score of TEMIR, we used Cronbach’s alpha coef-

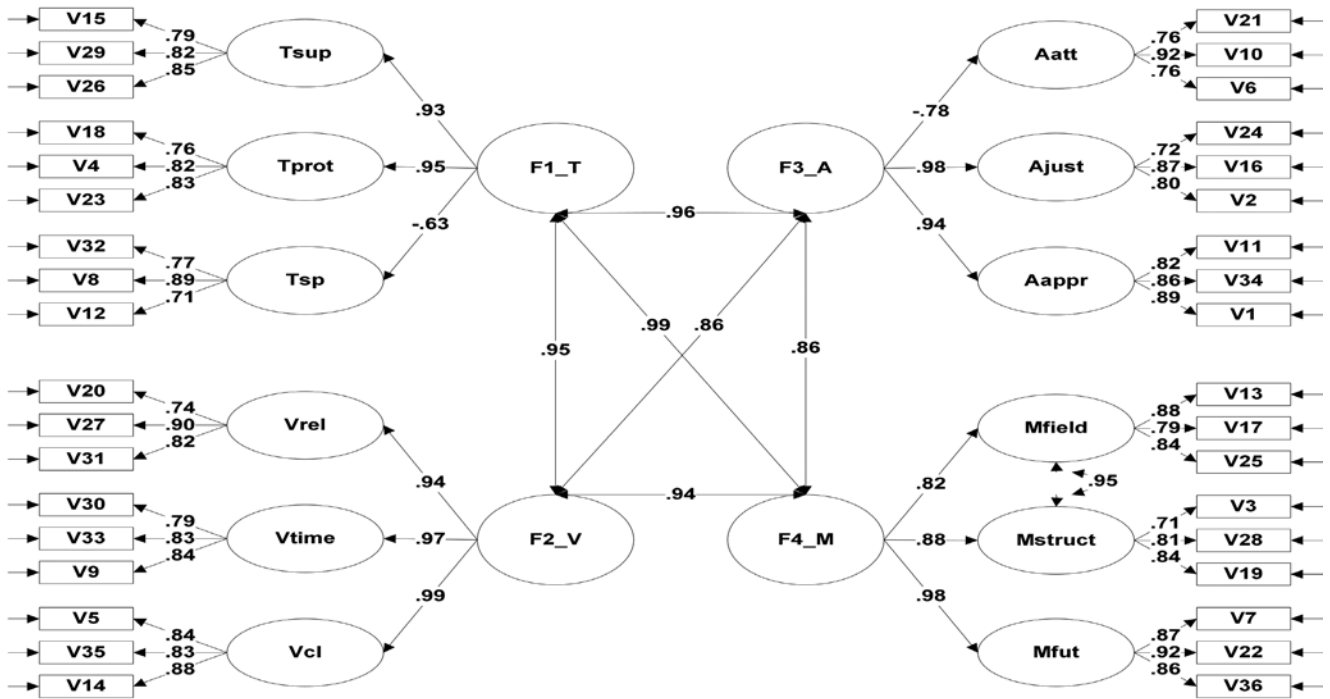


Figure 2: The final confirmatory factor model of the questionnaire (N=634)
 Note: $\chi^2 = 1595.53$, $df = 575$, $p < 0.001$; CFI = 0.925, RMSEA = 0.053

ficient (see Table 4). All the resulting scales and subscales exhibited sufficiently high reliability for both research and diagnostic purposes ($\alpha > 0.80$).

VALIDITY STUDIES

To evaluate face validity of TEMIR, we compared groups of those who said their relationship was fulfilling (N=248) and those who reported it was not completely satisfying (N=148) using Student t test. The differences were significant ($p < .001$) for all the TEMIR scales and subscales. Cohen's d effect size coefficients (reflecting difference between the groups in pooled standard deviation units) were in the 1.35-1.84 for the 4 scales (see Table 4) and 1.10-1.66 for the 12 subscales. The normative data presented in Table 5 can be used to develop cut-off criteria to differentiate successful and unsuccessful relationships.

To investigate the convergent validity of TEMIR, we studied the correlations between the scales of TEMIR and those of two measures of general existential fulfilment (TEM and Existence Scale). The results are presented in Table 6. TEMIR exhibited weak to moderate correlations with all the scales of ESK. The strongest were its correlations with the Self-Transcendence scale. This suggests that capacity for self-transcendence is the personal ability of those measured by ESK that is the most essential to achieve fulfilment in a relationship.

We expected correlations of TEMIR with TEM to follow a theoretically predicted pattern (scales from the two tests corresponding to the same fundamental motivation would correlate more strongly, compared to those corresponding to different fundamental motivations). The resulting correlations (presented in Table 6) did not follow this pattern: All the scales of TEM and TEMIR exhibited weak to moderate intercorrelations.

We have undertaken additional analyses using path ana-

Scale / subscale	N items	Cronbach's alpha	Mean	Standard deviation	Skewness	Kurtosis
Tir (1st mot)	9	0.89	40.93	11.27	-0.75	-0.57
Tsup	3	0.86	13.25	4.60	-0.72	-0.69
Tprot	3	0.85	13.36	4.46	-0.88	-0.37
Tsp	3	0.83	14.32	4.13	-1.32	0.86
Vir (2nd mot)	9	0.95	43.84	11.64	-1.35	0.98
Vrel	3	0.86	14.47	4.07	-1.32	0.84
Vtime	3	0.86	15.07	3.98	-1.51	1.40
Vcl	3	0.88	14.30	4.24	-1.15	0.27
Air (3rd mot)	9	0.92	47.65	11.60	-0.81	-0.47
Aatt	3	0.85	20.69	4.40	-0.91	-0.39
Ajust	3	0.84	13.10	4.27	-0.81	-0.40
Aappr	3	0.89	13.86	4.31	-0.94	-0.24
Mir (4th mot)	9	0.94	38.88	12.75	-0.69	-0.64
Mfield	3	0.87	12.89	4.48	-0.62	-0.74
Mstruct	3	0.83	12.41	4.42	-0.53	-0.76
Mfut	3	0.91	13.58	4.81	-0.91	-0.45
Overall	36	0.97	171.30	43.84	-0.82	-0.47

Table 4: Psychometric properties of the TEMIR questionnaire

lysis to investigate the associations between TEMIR and TEM. We started with a complete model and proceeded by removing non-significant parameters. The resulting path model is presented on Figure 3. We found that all four TEM scales were significantly predicted only by the fulfilment of

Scale / sub-scale	Successful relationship (N=248)		Unsuccessful relationship (N=148)		Student t (430)	Cohen's d
	Mean	SD	Mean	SD		
Tir (1st mot)	46.28	8.20	30.68	9.06	18.10***	1.84
Vir (2nd mot)	48.36	9.24	35.16	10.85	13.26***	1.35
Air (3rd mot)	52.54	8.48	38.27	11.01	14.94***	1.52
Mir (4th mot)	44.11	9.79	28.84	11.73	14.35***	1.46
Overall	191.29	32.90	132.95	36.00	16.93***	1.72

Table 5: Descriptive statistics and effect sizes for the difference between successful and unsuccessful relationships Note: ***p<0.001

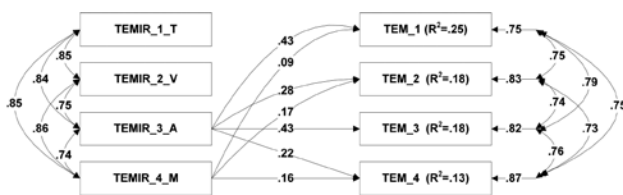


Figure 3: Path model of the relationship between TEMIR and TEM scales (N=432)

Note: $\chi^2 = 7.40$, $df = 9$, $p = 0.60$; $CFI > 0.999$, $RMSEA < 0.001$; all paths significant at $p < 0.05$

the 3rd and 4th existential motivations in a significant relationship, as measured by TEMIR. This result provides some support for the discriminant validity of the four TEMIR scales. The results suggest that frustration of the 3rd motivation in a close relationship may have the most detrimental effect on the fulfilment of all four fundamental motivations in life in general. However, longitudinal studies are needed to investigate the dynamics of this process and the potential causal links. To summarize, significant moderate intercorrelations

of TEMIR with ESK and TEM support the convergent validity of the new measure.

Two separate studies were conducted by the first two authors in order to investigate the criterion validity of TEMIR. The results are presented in a separate publication (Ukolova & Shumskiy 2012), which is not available in English and will be briefly summarized here. In the first study, we interviewed 30 female respondents aged 18 to 40 and used phenomenological analysis (Spinelli 2007) to generate descriptions of the phenomena of love, amorousness, and unrequited love. Using these descriptions, we recruited 90 respondents (N=30 for each of the three phenomena) and compared their scores on TEMIR (because the normality assumption was not met in some subsamples, non-parametric statistics were used in these two studies). Using Kruskal-Wallis test, we found significant differences between the 3 phenomena on all 4 fundamental motivation scales ($p < 0.001$), indicating that the love relationship was the most fulfilling and unrequited love was the least fulfilling in each case. The results support the validity of TEMIR by indicating that the measure successfully differentiates the experiences of more fulfilling (love) and less fulfilling (amorousness, unrequited love) romantic relationships.

In another study, respondents (120 university students of different specialties, aged 17 to 23) were asked to answer TEMIR for an important relationship, which could be a friendship or a romantic relationship. The respondents who completed TEMIR for a friendship (N=72) reported higher scores on the 1st and 3rd fundamental motivation scales (Mann-Whitney test, $p < 0.01$), compared to those who completed TEMIR for a romantic relationship (N=48). The results indicate that in late teenage years and in emerging adulthood friendships are experienced as more fulfilling, because they involve more trust and allow for more authenticity, compared to romantic relationships. This is in line with empirical findings indicating that adolescents' interactions with their friends are more positive (Furman & Shomaker 2008) and with theory suggesting that intimacy emerges

	ESK				TEMIR				TEM			
	SD (self-distance)	ST (self-transcendence)	F (freedom)	V (responsibility)	Tir (1st motiv.)	Vir (2nd motiv.)	Air (3rd motiv.)	Mir (4th motiv.)	TEM_1 (trust)	TEM_2 (fundamental value)	TEM_3 (self-value)	TEM_4 (meaning)
SD												
ST	0.61											
F	0.59	0.63										
V	0.61	0.62	0.79									
Tir	0.16	0.37	0.30	0.25								
Vir	0.21	0.39	0.27	0.23	0.83							
Air	0.19	0.40	0.37	0.33	0.84	0.73						
Mir	0.23	0.44	0.30	0.23	0.83	0.83	0.73					
TEM_1	0.45	0.67	0.67	0.58	0.42	0.34	0.48	0.41				
TEM_2	0.39	0.74	0.52	0.43	0.38	0.32	0.43	0.38	0.78			
TEM_3	0.42	0.62	0.67	0.59	0.35	0.29	0.45	0.35	0.83	0.75		
TEM_4	0.53	0.71	0.65	0.61	0.30	0.27	0.35	0.35	0.75	0.73	0.77	

Table 6: Correlations of the TEMIR scales with the Existence Scale (ESK) and Test of Existential Motivation (TEM) (N=303) Note: all correlations are significant ($p < 0.01$)

in adolescent friendships and lays the ground for later and more complicated romantic relationships (Furman, Brown & Feiring 1999). These theoretically predicted differences between TEMIR scores for friendship and romance support the criterion validity of the new measure. The results of both studies indicate that TEMIR can successfully differentiate between relationships of different types, although additional research using larger and more representative samples is needed to develop specific scoring criteria.

GENDER AND RELATIONSHIP DIFFERENCES IN TEMIR SCORES

To investigate differences in the ways males and females experience relationships, we compared their scores on TEMIR in the online sample. Based on the face validity question, we found that females were more likely to say that their relationship was (or is) successful (71.4%), compared to males (57.4%); this difference was significant using chi-square test ($\chi^2(1) = 9.20, p < 0.01$). When we compared scores on TEMIR using Student t-test, the results indicated that females perceive relationships in a more positive way (Table 7). The only scale for which we did not find any significant differences was the 3rd motivation, which suggests that in the context of Russian culture it might be more difficult for a woman to remain herself in a close relationship.

When we compared both genders by type of relationship reported, we found that the pattern was not uniform: Males were more likely to report being in a “free” relationship

(48.3% of males, compared to 35.9% of females), whereas females were more likely to report a “civil marriage” (21.0% of males, compared to 29.7% of females). There were no such pronounced differences in reporting rates between males and females for official marriage (20.5% and 23.4%, respectively) or “other” (10.2% and 10.9%, respectively). This difference was not statistically significant ($\chi^2(3) = 7.37, p = 0.061$).

To investigate whether gender or relationship type was a more important predictor of fulfilment in a relationship, we used a 2x3 MANOVA design with the scores on the four TEMIR scales as dependent variables. The factors were gender with 2 levels and relationship type with 3 levels, “free” relationship (N=177), “civil” (unregistered) marriage (N=113), and official (registered) marriage (N=97) (the “other” type of relationship was excluded because of its low relative frequency). The results are presented in Tables 8 and 9.

We found that the effect of gender was less pronounced than the effect of relationship type. Bonferroni post-hoc tests (see Table 9) indicated that “free relationship” was less fulfilling than either unregistered “civil marriage” or official marriage, while the latter two did not differ statistically. This pattern of significant differences was observed with respect to each of the four fundamental motivation scales. Absence of a significant interaction effect suggests that this association of relationship type to fulfilment is uniform for males and females.

It is not clear whether males and females tend to report different relationships or whether male and female partners tend to experience the same unofficial relationships in different ways (males as a “no-commitments” and females as a committed long-term relationship, unregistered marriage). This question can be resolved in future studies using data from both partners in couples to take into account the relationship factor. But, whatever the case is, the results still suggest that commitment in a relationship is essential in order to experience existential fulfilment.

	Males (N=176)		Females (N=256)		Student t (430)	Cohen's d
	M	SD	M	SD		
EFir	164.02	44.10	176.31	43.03	2.89**	0.28
Tir	38.56	11.23	42.56	11.03	3.68***	0.36
Vir	41.98	12.05	45.11	11.20	2.77**	0.27
Air	46.75	11.45	48.27	11.68	1.34	0.13
Mir	36.73	13.07	40.36	12.33	2.93**	0.29
Tsup	12.45	4.69	13.79	4.46	3.01**	0.30
Tprot	12.60	4.45	13.89	4.40	2.99**	0.29
Tsp	13.52	4.44	14.88	3.81	3.41***	0.33
Vrel	13.80	4.22	14.93	3.91	2.86**	0.28
Vtime	14.47	4.26	15.49	3.72	2.64**	0.26
Vcl	13.72	4.35	14.70	4.12	2.38*	0.23
Aaff	20.85	4.18	20.57	4.55	0.63	0.06
Ajust	12.65	4.30	13.42	4.22	1.85	0.18
Aappr	13.26	4.42	14.28	4.18	2.45*	0.24
Mfield	12.21	4.60	13.36	4.34	2.64**	0.26
Mstruct	11.87	4.47	12.79	4.36	2.13*	0.21
Mfut	12.65	5.07	14.21	4.53	3.34***	0.33

Table 7: Gender differences obtained by TEMIR (N=432)
Note: M – mean, SD – standard deviation; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

	Wilks' λ	F	df	Partial η^2
Gender	0.96	3.79**	4; 377	0.039
Relationship	0.91	4.62***	8; 754	0.047
Gender x Relationship	0.98	1.01	8; 754	0.011

Table 8: The results of multivariate ANOVA
Note: *** $p < 0.001$, ** $p < 0.01$

Scale	Free Relationship vs. Civil Marriage	Free Relationship vs. Official Marriage	Civil Marriage vs. Official Marriage
Tir	0.52***	0.60***	0.08
Vir	0.41***	0.40**	-0.02
Air	0.37**	0.42**	0.04
Mir	0.44***	0.57***	0.12

Table 9: Cohen's d values for pairwise group differences (based on observed means)
Note: asterisks denote the significance of the Bonferroni post-hoc test, *** $p < 0.001$, ** $p < 0.01$

CONCLUSION

The evidence collected so far suggests that existential fulfilment in a close relationship can be measured using psychometric tools, such as the TEMIR questionnaire. The results of confirmatory factor analysis indicate 4 theoretically predicted second-order factors corresponding to the four existential fundamental motivations, in line with Längle's theorizing. The scales and subscales formed on the basis of this hierarchical structure demonstrate high reliability.

Strong associations between the 4 scales suggest that the overall relationship quality (or general experience of fulfilment) is an important dimension of relationships. It is likely that fulfilment of each of the four motivations does not come on its own: The fundamental motivations are inter-related and certain problematic aspects (for instance, lack of meaning or common future in a relationship) may be reflected on relationship as a whole (for instance, resulting in less closeness or less appreciation of the partner). Additional studies comparing different relationship types and relationships of different temporal span are needed to find out whether the four fundamental motivations are always fulfilled in combination.

More data are also needed to find out whether the second-order structure holds for different age groups or for different relationship types. The study presented in this paper can be seen as a pilot one, making a strong case for measurement of existential fulfilment in relationships. The work on validation of TEMIR is still underway. However, the data we have obtained so far indicate that TEMIR successfully differentiates relationships of different quality (successful vs. unsuccessful; committed vs. uncommitted; unrequited love vs. mutual love) and of different types (friendship vs. romantic relationship).

Associations between the TEMIR scales and indices of general existential fulfilment (ESK and TEM) provide evidence of convergent validity of TEMIR and suggest that domain-specific fulfilment (in a close relationship) is associated with the general experience of fulfilment in life. Additional studies are needed to investigate how TEMIR scores are related to other personality variables and to establish specific scoring criteria using representative samples before the questionnaire can be recommended for clinical use. At present, we see it as a new and promising Russian-language research tool and invite colleagues to discuss and to critically evaluate this test, as well as to develop similar instruments in other languages.

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Appendix is added in the following page in a compact form.

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APPENDIX

TEMIR Questionnaire

Please use the scale below to estimate to what extent the following statements correspond to your relationship with a close person (a friend, a beloved).

Completely does not correspond	Mainly does not correspond	Slightly does not correspond	Slightly corresponds	Mainly corresponds	Completely corresponds
1	2	3	4	5	6

TEMIR scoring key

To calculate test score all direct statements are added together using the following key: «completely does not correspond» — 1, «mainly does not correspond» — 2, «slightly does not correspond» — 3, «slightly corresponds» — 4, «mainly corresponds» — 5, «completely corresponds» — 6. Reverse-scored items are added together using the opposite key: «completely does not correspond» — 6, «mainly does not correspond» — 5, «slightly does not correspond» — 4, «slightly corresponds» — 3, «mainly corresponds» — 2, «completely corresponds» — 1.

After that, all scores for each of the 12 sub-scales and for each of the 4 scales (Tir, Vir, Air, Mir) are summed up. The total for all scales is the general EFir index that shows existential fulfillment of a person in certain interpersonal relationships.

$$Tir = Tsup + Tprot + Tsp$$

$$Vir = Vrel + Vtime + Vcl$$

$$Air = Aatt + Ajust + Aappr$$

$$Mir = Mfield + Mstruct + Mfut$$

$$EFir = Tir + Vir + Air + Mir$$

Scale	Sub-scale	Number of questions	Item number
Trust in interpersonal relationships (Tir) 9 items	Support (Tsup)	3	15, 26, 29
	Protection (Tprot)	3	4, 18, 23
	Space (Tsp)	3	8*, 12*, 32*
Value of life in relationships (Vir) 9 items	Relatedness (Vrel)	3	20, 27, 31
	Time (Vtime)	3	9, 30, 33
	Closeness (Vcl)	3	5, 14, 35
Authenticity in relationships (Air) 9 items	Attention (Aatt)	3	6*, 10*, 21*
	Justice (Ajust)	3	2, 16, 24
	Appreciation (Aappr)	3	1, 11, 34
Meaning of relationships (Mir) 9 items	Field of Common Activity (Mfield)	3	13, 17, 25
	Structural Context (Mstruct)	3	3, 19, 28
	Common Future (Mfut)	3	7, 22, 36

Please answer spontaneously, do not skip statements.

STATEMENT	To what extent does this statement correspond to our relationship? Completely does not correspond— Completely corresponds
1) I feel that my partner appreciates me as a person.	1 2 3 4 5 6
2) My partner treats me with justice.	1 2 3 4 5 6
3) This relationship makes my life more structured.	1 2 3 4 5 6
4) I feel protected thanks to this relationship.	1 2 3 4 5 6
5) There is closeness in our relationship.	1 2 3 4 5 6
6) I often feel that my partner does not pay attention to me.	1 2 3 4 5 6
7) As time passes, our relationship fills up with new important content.	1 2 3 4 5 6
8) I feel cramped in this relationship.	1 2 3 4 5 6
9) The more time we spend together, the more connected we feel.	1 2 3 4 5 6
10) I feel that my partner neglects me.	1 2 3 4 5 6
11) My partner appreciates my uniqueness and individuality.	1 2 3 4 5 6
12) I do not have enough personal space in this relationship.	1 2 3 4 5 6
13) The horizon of my life widens thanks to this relationship.	1 2 3 4 5 6
14) I feel warmth in our relationship.	1 2 3 4 5 6
15) Negative moments in our relationship do not destroy it.	1 2 3 4 5 6
16) I feel that there is a complete understanding between us.	1 2 3 4 5 6
17) Thanks to this relationship, I discovered lots of new and interesting things about the world and myself.	1 2 3 4 5 6
18) I feel that my partner is always on my side, no matter what happens.	1 2 3 4 5 6
19) This relationship makes me feel part of something important.	1 2 3 4 5 6
20) I can feel joys and sorrows of my partner.	1 2 3 4 5 6
21) I feel that my partner often offends me.	1 2 3 4 5 6
22) I feel that something really valuable may arise out of our relationships.	1 2 3 4 5 6
23) Thanks to this relationship, I feel that I am not alone in life.	1 2 3 4 5 6
24) In our relationship, me and my partner have equal rights.	1 2 3 4 5 6
25) Thanks to this relationship, I get new opportunities.	1 2 3 4 5 6
26) I can say that our relationship is lasting.	1 2 3 4 5 6
27) When my partner is nearby I feel that life is good.	1 2 3 4 5 6
28) I find reference points in my life thanks to this relationship.	1 2 3 4 5 6
29) Our relationship has a firm base.	1 2 3 4 5 6
30) I do not regard my time in this relationship as spent in vain.	1 2 3 4 5 6
31) I am glad to devote much time to this relationship.	1 2 3 4 5 6
32) I feel that I need a bigger distance in this relationship.	1 2 3 4 5 6
33) This relationship plays a vital role in my life.	1 2 3 4 5 6
34) I feel that my partner respects me and those things that are important to me.	1 2 3 4 5 6
35) I can always feel I am connected with my partner.	1 2 3 4 5 6
36) I think we have a future in our relationship.	1 2 3 4 5 6