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ORIGINAL ARTICLE

Developmental Crisis Questionnaire (DCQ-12): psychometric characteristics of the Czech version among adult respondents

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BACKGROUND
This study examined the psychometric properties of the Czech version of the Developmental Crisis Questionnaire (DCQ-12), assessing its internal consistency, factor structure, and associations with psychosocial variables such as self-esteem, social support, life satisfaction, negative emotionality, and perceived stress.

PARTICIPANTS AND PROCEDURE
The sample included 761 participants aged 19-59 years, primarily women (68.4%), recruited online. DCQ-12, along with measures for self-esteem, self-efficacy, life satisfaction, perceived stress, and negative emotionality, was administered. Confirmatory factor analysis (CFA) and McDonald's omega were employed to evaluate the questionnaire's structure and reliability. Age and gender differences were assessed through two-way ANOVA.

RESULTS
DCQ-12 demonstrated high internal consistency (ω = .89 for the total scale), though one subscale (Transition and Turning Point) showed lower reliability (ω = .63). A three-factor model with minor modifications exhibited good fit (CFI = .956, RMSEA = .068). DCQ-12 correlated positively with stress and negative emotionality, and negatively with self-esteem, self-efficacy, life satisfaction, social support, and meaning in life. Developmental crisis was more prevalent among younger adults and women. Crisis prevalence declined with age and varied by gender, with notable differences observed in younger and middle adulthood.

CONCLUSIONS
The Czech version of DCQ-12 is a reliable tool for assessing developmental crisis across adulthood. The current findings align with existing literature on psychosocial predictors of crisis. Future studies should explore the utility of DCQ-12 in diverse age groups and cultural contexts.

KEY WORDS
middle adulthood; young adulthood; developmental crisis; older adulthood

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BACKGROUND

Developmental crises in adulthood extend beyond midlife to early and later adulthood, including quarter-life and later-life crises. Psychological theories have explored these crises, notably Erikson's (1950) psychosocial development theory, which views crises as usual and beneficial, and Levinson's (1986) adult development theory, which links crises to transition periods, particularly midlife. Recent perspectives further examine crises across life stages, including quarter-life (Robinson, 2016), midlife (Shek, 1996), and later-life crises (Robinson & Stell, 2015). Existing research indicates that a substantial proportion of adults may experience developmental crises: 19-49% of those in their 20s (Millová & Svárovská, 2020; Robinson & Wright, 2013; Yeler et al., 2021), 25-51% in their 30s (Robinson & Wright, 2013; Yeler et al., 2021) and 9-59% in their 40s (Petrov et al., 2022; Robinson & Wright, 2013).

Petrov et al. (2022) developed an English self-report measure of developmental crisis, the Developmental Crisis Questionnaire (DCQ-12). Given that culture can affect the experience of developmental crisis (see, e.g., Duara et al., 2021), it is important to explore the structure and validity of the DCQ-12 in different languages and cultures. Therefore, this study examines the psychometric properties of a Czech version of the DCQ-12 and its association with selected characteristics of psychosocial functioning.

Developmental crises in adulthood are transitional phases marked by emotional turmoil and introspection. As episodic and temporary experiences, they help people navigate challenges, fostering personal growth and adaptation, highlighting the dynamic nature of human development (Petrov et al., 2022; Robinson, 2016; Shek, 1996). Petrov et al. (2022) identified common manifestations of crises, including loss of meaning in life, identity struggles, and negative emotions. Quarter-life crisis often involve insecurity and anxiety about limitless opportunities and a mismatch between life choices and perceived maturity (Robinson, 2016, 2019). Midlife crisis typically stems from health declines and caregiver stress (Shek, 1996), while later-life crisis focuses on meaning in life, shifting goals, and awareness of mortality (Robinson & Stell, 2015).

METHODS OF MEASURING DEVELOPMENTAL CRISIS

Developmental crises can be studied qualitatively and quantitatively. Qualitative methods include interviews and group discussions. A considerable part of quarter-life crisis research has been based on interviews, social media posts, and case studies (Robinson, 2016, 2019; Robinson & Wright, 2013), while midlife crisis studies have often used unstructured, semi-structured interviews, or focus groups (Kagawa-Singer et al., 2002; Wethington, 2000).

The quantitative approach primarily uses self-report methods, some targeting age-specific crises such as quarter-life or midlife, while others assess developmental crises in general. Quarter-life crisis scales include the unidimensional Quarter-Life Crisis Questionnaire (Agustin, 2012), the 8-factor Quarterlife Crisis Scale (Pinggolio, 2015), and the 4-factor Quarter Life Crisis Scale (Hira et al., 2022), though their use remains limited outside their original countries. Midlife crisis measures include the 4-factor Mid-life Crisis Scale (Kim & Yoon, 1991), the Chinese Midlife Crisis Scale (Shek, 1996), the 3-factor Mid-Life Crisis Questionnaire (Oleś, 1995), and the Midlife Crisis Scale (Hermans & Oleś, 1999), derived from previous method.

Other self-report instruments assess developmental crises that occur at any point in adult life. The Adult Crisis Episode Retrospective Self-Assessment Tool (Robinson & Wright, 2013) evaluates crises retrospectively. The unidimensional Crisis Screening Questionnaire (Petrov et al., 2019) compares life experiences over six months and has shown strong psychometric properties (Millová & Svárovská, 2020; Yeler et al., 2021). The latest measure, the 12-item Developmental Crisis Questionnaire (DCQ-12; Petrov et al., 2022), assesses crises across three dimensions: Disconnection and Distress, Lack of Clarity and Control, and Transition and Turning Point. The scale also allows a categorical distinction between a present and absent developmental crisis. Using this cutoff score, the authors found that 25% of women and 16% of men in young adulthood, 9% of women and 25% of men in middle age, and 0% of women and 5% of men in later life were experiencing or had experienced a developmental crisis in the last six months.

CURRENT STUDY

This study evaluated the psychometric properties of the Czech Developmental Crisis Questionnaire (DCQ-12), including internal consistency, structure, and associations with protective or risk factors. The results of previous research indicate that several factors contribute to the experience of developmental crises, including low social support, which limits access to help or advice (Millová & Svárovská, 2020), and a lack of meaning in life, increasing uncertainty about one's direction of life (Petrov et al., 2022). High stress from unrealistic societal expectations (Chang, 2018), low self-esteem and self-efficacy (Petrov et al., 2022), and dissatisfaction in financial and interpersonal areas (Robinson, 2016, 2019) have also been linked to crisis experiences. Additionally, lower education levels can reduce coping resources (Chang, 2018).

The original DCQ-12 items (Petrov et al., 2022) were derived from the literature on developmen-

tal crises and systematic analysis of existing scales. Exploratory factor analysis (EFA) refined 41 items to 12, revealing three dimensions explaining more than 50% of variance: Disconnection and Distress (42.1%), Lack of Clarity and Control (7.2%), and Transition and Turning Point (4.4%). Confirmatory factor analysis (CFA) confirmed an adequate model fit (GFI = 0.910, CFI = 0.911, RMSEA = 0.082). Discriminant validity was confirmed using the heterotrait-monotrait criterion (HTMT < 0.71). Correlations between DCQ-12 and measures of stress, depression, self-esteem, locus of control, authenticity, optimism, and meaning in life supported its convergent and discriminant validity. Cronbach's α ranged from .72 to .78 for each dimension and .79 for the full scale. Test-retest reliability over four weeks was satisfactory (.78-.89).

A recent validation of the Indonesian DCQ-12 (Aprodita et al., 2024) in young adults (18-40 years) showed good internal consistency (Cronbach's α = .78). EFA identified a three-factor structure that explained almost 60% of variance: Disconnection and Distress (21.9%), Lack of Clarity and Control (18.6%), and Transition and Turning Point (19.5%). CFA initially showed a borderline fit but improved after removing two items (CFI = 0.942, RMSEA = 0.075, SRMR = 0.065). Convergent validity was confirmed, with construct reliability (CR) above 0.70 and average variance extracted (AVE) above 0.50.

Recent models suggest that developmental crises may occur throughout adulthood. In young adults, a quarter-life crisis may take a 'locked-out' form, common in the 20s, where individuals struggle to assume adult roles, not feeling mature enough for them yet, lacking competence or resources. The 'locked-in' type, more frequent in the 30s, involves feeling trapped in unsuitable commitments (Robinson, 2016, 2019). Midlife crisis, occurring in the 40s and 50s, is often linked to caregiving demands and the first signs of ageing (Shek, 1996). Contrary to age-specific measures, DCQ-12 assesses crises across whole adulthood and can provide a much more complete picture of the experience of developmental crisis. Therefore, this study examined developmental crises in people aged 19-59, exploring the effect of age on their experience of developmental crisis.

Previous studies have suggested that men and women experience developmental crises differently due to varying developmental expectations. Quarter-life crisis is often reported at higher levels in women, linked to greater risk factors such as depression and anxiety (Millová & Svárovská, 2020; Robinson & Wright, 2013; Yeler et al., 2021). The findings on midlife crisis are mixed, with some studies indicating higher levels in women (Robinson & Wright, 2013) and others in men (Petrov et al., 2022). This study examines the effect of gender (separately and for each age group) on the experience of a developmental crisis.

PARTICIPANTS AND PROCEDURE

PARTICIPANTS

The research sample consisted of 761 participants recruited online using the convenience sampling method. Participation was voluntary and anonymous. The majority of the participants were women (68.4%) and under 30 years of age (55.4%). Approximately 68% had a partner, 38.5% had children, and 51.9% had obtained a high school diploma. The majority (51.2%) were employed. See Table 1 for details.

MEASURES

The Developmental Crisis Questionnaire (DCQ-12; Petrov et al., 2022) is a 12-item scale assessing developmental crises over the past six months. Responses are rated on a 5-point Likert scale (1 – *strongly disagree*; 5 – *strongly agree*) across three dimensions: Disconnection and Distress, Lack of Clarity and Control, and Transition and Turning Point. Scores classify crisis as absent (≤ 41) or present (≥ 42). The DCQ-12 was translated into Czech through two independent translations, back-translations, and subsequent evaluation by members of the research team. The final version was consulted with an English translator working in the area of psychology. See Supplementary materials for the full Czech version.

The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) is a 10-item measure of global self-esteem rated on a 4-point scale from 1 (*strongly disagree*) to 4 (*strongly agree*).

The General Self-Efficacy Scale (GSES; Schwarzer & Jerusalem, 1995) assesses self-efficacy with 10 items on a 4-point scale from 1 (*not true at all*) to 4 (*exactly true*).

The Satisfaction with Life Scale (SWLS; Pavot & Diener, 1993) measures life satisfaction using five items rated on a 7-point scale from 1 (*totally disagree*) to 7 (*totally agree*).

The MOS Social Support Survey (MOS; Sherbourne & Steward, 1991) is a 19-item scale (1 – *never*; 5 – *always*) assessing Emotional/Informational, Affectionate, and Tangible Support. The Czech version excludes the Positive Social Interactions dimension.

The Meaning in Life Questionnaire (MLQ; Steger et al., 2006) is a 10-item scale (1 – *totally disagree*; 7 – *totally agree*) evaluating meaning in life with two subscales: Presence of Meaning and Search for Meaning.

The Perceived Stress Scale (PSS; Cohen et al., 1983) measures stress appraisal with 10 items on a 5-point scale from 0 (*never*) to 4 (*very often*).

The Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001) is a 9-item screening tool for negative emotivity, with Depression (somatic) and Anxiety

Table 1

Sample characteristics

Variables and their levels	*n*	%
Gender		
Women	518	68.4
Men	240	31.5
Non-binary	3	0.4
Age group		
19-29 years	422	55.5
30-39 years	144	18.9
40-49 years	108	14.2
50-59 years	87	11.4
Partnership status		
Single	202	26.5
Has a partner, no shared living	114	15.0
Has a partner, shared living	167	21.9
Married	238	31.3
Divorced	39	5.1
Widowed	1	0.1
Children		
No	468	61.5
Yes	293	38.5
Highest education		
Primary school	9	1.2
High school without certificate	56	7.4
High school with certificate	395	51.9
University	301	39.6
Main activity		
Full-time student	256	33.6
Employee	390	51.2
Entrepreneur	54	7.1
On maternity leave	41	5.4
Other	20	2.6

(emotional-cognitive) subscales, rated on a 4-point scale from 0 (*not at all*) to 3 (*nearly every day*).

DATA ANALYSIS

Data were analyzed in R 4.4.1 using *tidyverse* (Wickham et al., 2019) for data transformation/plotting, *psych* (Revelle, 2024) for summary statistics, *lavaan* (Rosseel, 2012) for confirmatory factor analysis, *semTools* (Jorgensen et al., 2022) for reliability and *dynamic* (Wolf & McNeish, 2022) for fit index cutoffs. Scale and subscale scores were computed as item means. Internal consistency was estimated using McDonald's ω total (Flora, 2020). DCQ-12 allows the creation of categorical variable crisis present (score ≥ 42) or absent (≤ 41) (Petrov et al., 2022). It was assessed using descriptive statistics and chi-square tests across age and gender groups.

The robust maximum likelihood method was used for confirmatory analysis of DCQ-12, as it accounts for non-normality and provides accurate interfactor correlations with minimal underestimation of factor loadings for ordinal items (Li, 2016). The model fit was evaluated using dynamic cutoffs, which, contrary to traditional fixed cutoffs, adjust for model characteristics such as item count, factor loadings and sample size, optimizing rejection rates for misspecified models (McNeish & Wolf, 2023). The basic idea behind the dynamic cutoffs is to treat the estimated model as a true model and run simulations to generate a distribution of fit indices under a correctly specified model. Then, a minor misspecification (one missing cross-loading) is added to the model to generate the distribution of fit indices under an incorrectly specified model. Finally, the fit index cutoffs are set to optimally distinguish between the correctly specified model and incorrectly specified model, so that at least 95% of incorrectly specified models will be correctly rejected, while no more than 5% of correctly specified models will be rejected. Bivariate correlations between DCQ-12 and other variables were calculated, along with disattenuated correlations to account for the lower reliability of the DCQ-12 subscale Transition and Turning Point (Furr, 2022).

Lastly, we conducted a two-way ANOVA to examine the effects of age, gender, and their interaction on DCQ-12 scores. Age was categorized into four groups (19-29, 30-39, 40-49, 50-59) based on research on developmental crises. Individuals aged 19-29 often experience a 'locked-out' quarter-life crisis (Millová & Svárovská, 2020), while those aged 30-39 are more prone to a 'locked-in' crisis (Robinson, 2016). Ages 40 to 49 are commonly associated with a midlife crisis and 50 to 59 with the 50s transition (Levinson, 1986). Due to the small sample size of non-binary participants (n = 3), gender was analyzed as a binary variable.

RESULTS

DESCRIPTIVE STATISTICS AND RELIABILITY ESTIMATES

Table 2 shows descriptive statistics for all scales and their subscales, including means, standard devia-

Table 2

Descriptive statistics

Scales and subscales	*M*	*SD*	Skew	Kurt	n_{items}	ω
Developmental Crisis Questionnaire	2.83	0.82	0.08	−0.72	12	.89
Disconnection and Distress	2.45	1.14	0.49	−0.81	4	.87
Lack of Clarity and Control	2.83	0.90	0.17	−0.64	4	.77
Transition and Turning Point	3.21	1.03	−0.21	−0.77	4	.63
Satisfaction with Life Scale	4.63	1.36	−0.43	−0.66	5	.87
Perceived Stress Scale	3.00	0.80	−0.08	−0.71	10	.90
Patient Health Questionnaire	2.21	0.74	0.44	−0.69	9	.89
Anxiety	2.05	0.85	0.62	−0.60	4	.85
Depression	2.35	0.76	0.28	−0.80	5	.80
Rosenberg Self-Esteem Scale	2.91	0.70	−0.26	−0.90	10	.90
General Self-Efficacy Scale	2.85	0.59	−0.14	−0.52	10	.90
MOS Social Support Survey	4.14	0.82	−1.10	0.74	19	.96
Emotional-Informational Support	4.04	0.90	−1.01	0.49	9	.83
Tangible Support	4.25	0.85	−1.19	0.76	4	.86
Affectionate Support	4.28	0.98	−1.39	1.03	3	.87
Meaning in Life Questionnaire	4.12	1.24	0.05	−0.59	10	.93
Presence of Meaning	4.76	1.57	−0.49	−0.61	5	.75
Search for Meaning	3.47	1.54	0.35	−0.67	5	.98

Note. $N = 761$. ω – McDonald's omega reliability estimate.

tions, skewness, and kurtosis coefficients. All variables approximately followed a normal distribution, except for the scores of MOS Social Support Survey and its subscales, which were negatively skewed.

The reliability estimate of the total DCQ-12 score was high; however, the DCQ-12 subscale Transition and Turning Point showed lower reliability (ω = .63). The reliability estimates for the remaining two subscales were higher (see Table 2).

CONFIRMATORY FACTOR ANALYSIS

We tested a three-factor DCQ-12 model: items 1-4 loading on Disconnection and Distress, items 5-8 on Lack of Clarity and Control, and items 9-12 on Transition and Turning Point. The initial model showed a poor fit (observed values of the fit indices are written before the slash and their cutoff after the slash): $\chi^2(51, N = 761) = 360.71$, $p < .001$, CFI = 0.921/0.946, RMSEA = 0.089/0.078, SRMR = 0.078/0.056. Inspection of the modification indices revealed a high residual correlation between items 9 and 10, the only items that directly refer to major life changes. Therefore, we concluded that it is justified to modify the original model. Allowing for correlated residuals improved model fit ($\chi^2(50, N = 761) = 223.51$, $p < .001$, CFI = 0.956/0.946, RMSEA = 0.068/0.078, SRMR = 0.048/0.056), with no substantial local misfit.

Figure S1 (see Supplementary materials) shows the standardized solution of the final model. As can be seen, the Disconnection and Distress factor and the Lack of Clarity and Control factor correlated more strongly with each other ($r = .78$) than with the Transition and Turning Point factor ($r = .57$, and $r = .50$). However, all three interfactor correlations were strong. Furthermore, all items had standardized loadings greater than or equal to .50, indicating that at least 25% of the variance in item responses was explained by the latent variables (factors).

CORRELATIONS OF DCQ-12 WITH OTHER VARIABLES

Table 3 shows the correlations between DCQ-12 subscales, as the well as correlations of DCQ-12 subscales and its subscales with other inventories. The total DCQ-12 score, Disconnection and Distress, and Lack of Clarity and Control showed similar correlations

Table 3

Correlations of DCQ-12 and its subscales with other variables

Variables	DCQ Total	DCQ DD	DCQ LCC	DCQ TTP
Disconnection and Distress (DCQ DD)	.87**			
Lack of Clarity and Control (DCQ LCC)	.80**	.65**		
Transition and Turning Point (DCQ TTP)	.73**	.40**	.33**	
Satisfaction with Life Scale (SWLS)	−.63**	−.66**	−.64**	−.22**
Perceived Stress Scale (PSS)	.73**	.71**	.66**	.38**
Patient Health Questionnaire (PHQ-9)	.71**	.72**	.59**	.38**
Depression (PHQ-9)	.73**	.79**	.62**	.34**
Anxiety (PHQ-9)	.58**	.56**	.47**	.35**
Rosenberg Self-Esteem Scale (RSES)	−.66**	−.67**	−.64**	−.28**
General Self-Efficacy Scale (GSES)	−.46**	−.47**	−.53**	−.11*
MOS Social Support Survey (MOS)	−.40**	−.45**	−.38**	−.13*
Emotional-Informational Support (MOS)	−.38**	−.42**	−.38**	−.10*
Tangible Support (MOS)	−.34**	−.37**	−.30**	−.14*
Affectionate Support (MOS)	−.33**	−.37**	−.31**	−.09*
Meaning in Life Questionnaire (MLQ)	−.65**	−.64**	−.58**	−.34**
Presence of Meaning (MLQ)	−.62**	−.66**	−.63**	−.20**
Search for Meaning (MLQ)	−.42**	−.36**	−.29**	−.35**

Note. $N = 761$. DCQ – Developmental Crisis Questionnaire; $^{*}p < .01$, $^{**}p < .001$.

with other variables. They correlated strongly and positively with PSS and PHQ-9 and strongly negatively with SWLS and MLQ. Furthermore, their correlations with GSES and MOS were moderate and negative. For Pearson correlations with 95% CI and disattenuated correlations (correlations corrected for imperfect reliability) see Supplementary materials.

TESTING THE EFFECT OF GENDER AND AGE ON DCQ-12 SCORES

DCQ-12 allows for the creation of a categorical variable indicating the presence or absence of a developmental crisis based on a cutoff score (one standard deviation above the mean). As our total DCQ-12 scores ($M = 2.8$, $SD = 0.8$) were comparable to those of Petrov et al. (2022; $M = 2.7$, $SD = 0.7$, calculated per item; $t = 0.84$, $df = 1147$, $p = .370$), we applied the same threshold (score ≤ 41 vs. ≥ 42 points). The prevalence rates of developmental crisis across gender and age groups are listed in Supplementary materials. Women were more likely to self-report a developmental crisis than men across all age groups, except in the oldest group ($\chi^2(1, N = 758) = 9.24$, $p = .009$; Cramer's $V = 0.11$, $p = .009$). In general, the prevalence of crisis decreased with age ($\chi^2(3, N = 758) = 45.73$, $p < .001$; φ and Cramer's $V = 0.25$, $p < .001$).

To examine the effect of gender, age, and their interaction on DCQ-12 when treated as a continuous variable, we conducted a series of two-way between-subjects ANOVAs. The total score and subscale scores of DCQ-12 served as the dependent variables. Table 4 shows the *F*-tests (type III) of all effects for each dependent variable and effect size estimates. As can be seen, the effect of age can be considered significant (with a moderate effect) for all dependent variables, explaining around 10% of variance across the dependent variables. The effect of gender was also significant but small in all cases, as it explained only around 1% of variance across the dependent variables. The effect of the interaction between gender and age was negligible and non-significant. Figure S2 (see Supplementary materials) helps to interpret these effects. As illustrated, men showed slightly lower scores in all DCQ-12 scales. However, the mean differences were only about 0.25 points when collapsing across age groups. Regarding age, DCQ-12 scores tended to be lower for people in older age groups compared to younger ones.

Table 4

Two-way between-subject ANOVAs with DCQ scores as dependent variables

Effects	Dependent variable											
	DCQ Total score			DCQ Disconnection and Distress			DCQ Lack of Clarity and Control			DCQ Transition and Turning Point		
	F	*p*	η^2	*F*	*p*	η^2	*F*	*p*	η^2	*F*	*p*	η^2
Gender	14.57	< .001	.02	7.65	.006	< .01	9.17	.003	.01	9.59	.002	.01
Age	45.32	< .001	.15	20.84	< .001	.08	24.96	< .001	.09	39.24	< .001	.13
Gender × Age	1.36	.254	< .01	0.89	.445	< .01	0.38	.768	< .01	2.33	.073	< .01

Note. $N = 758$; due to a small sample size of the non-binary participants group ($n = 3$), we did not include this group in the analysis. Type III *F*-tests are used. The degrees of freedom for the effects of gender, age, their interaction, and residuals are 1, 3, 3, and 750, respectively. DCQ – Developmental Crisis Questionnaire.

DISCUSSION

This study evaluated the psychometric properties of the Czech translation of DCQ-12 (Petrov et al., 2022), assessing internal, construct, and criterion validity. Given previous findings on gender and age differences in developmental crises (Millová & Svárovská, 2020; Petrov et al., 2022; Yeler et al., 2021), we also examined their effects. The analysis was carried out using categorical (crisis presence vs. absence) and continuous (scale scores) approaches.

INTERNAL CONSISTENCY

DCQ-12 showed high internal consistency overall, with satisfactory reliability for the Disconnection and Distress and Lack of Clarity and Control subscales. However, the Transition and Turning Point subscale had lower reliability ($\omega = .63$), prompting a correction for disattenuation in criterion validity analyses, i.e., correlations between DCQ-12 and other observed variables. Petrov et al. (2022) reported strong internal consistency but did not account for a residual correlation between items 9 and 10, which may have biased factor loadings and inflated reliability estimates. In their study, participants over 40 years old were relatively underrepresented. The Transition and Turning Point subscale, in particular, may be influenced by respondents' life experiences. As previous research suggests (Settersten, 2007), significant life transitions tend to concentrate during specific life stages – most notably in early adulthood (e.g., leaving the parental home, completing education, entering cohabitation or marriage, starting a family) and later adulthood (e.g., retiring, changes in family structure, health-related changes).

STRUCTURE OF DCQ-12

Next, we examined the DCQ-12 structure based on the three-factor model proposed by Petrov et al. (2022). However, this model showed a poor fit, mainly due to a residual correlation between items 9 and 10 (both from the Transition and Turning Point subscale). The content of item 9 ("I am experiencing a time of transition in my life") and item 10 ("I am passing through a major turning point in my life") is highly similar, reflecting the fact that the final set of DCQ-12 items in the original study was selected based on criteria that allowed for semantically similar items. Allowing their residuals to correlate improved the model fit, resulting in a well-fitting solution.

Then we examined the relationships among the DCQ-12 subscales, finding high interfactor correlations (all > .50). Disconnection and Distress correlated more strongly with Lack of Clarity and Control, while Transition and Turning Point showed slightly weaker but significant correlations with both. These results align with those of Petrov et al. (2022), who reported a similar pattern of relationships.

CRITERION VALIDITY

We assessed the criterion validity of DCQ-12 by correlating it with factors linked to developmental crises, including self-esteem, self-efficacy, social support, meaning in life, perceived stress, and negative emotionality (e.g., Chang, 2018; Millová & Svárovská, 2020; Robinson, 2016, 2019; Yeler, 2021). Higher developmental crisis scores were associated with lower life satisfaction, self-esteem, self-efficacy, and social support, but higher perceived stress and negative emotionality. These findings align with those of Petrov et al. (2022). However, some correlations, particularly for Disconnection and Distress with perceived stress (PSS) and depression (PHQ-9 subscale), were unexpectedly strong ($r > .70$). When corrected for disattenuation, these correlations were even higher, raising concerns about discriminant validity of DCQ-12, consistent with results reported by Petrov et al. (2022).

EFFECT OF GENDER AND AGE

Finally, we examined the effects of gender and age on DCQ-12 scores, categorizing participants as experiencing or not experiencing a developmental crisis. Most of the participants in the age groups did not meet the crisis criteria, although the proportions varied. The youngest group (19-29 years) had the highest prevalence of developmental crisis (33.9%), while the oldest group (50-59 years) had the lowest (5.7%), with overall likelihood decreasing with age. Men reported crises less frequently than women, except in the oldest group (7.3% vs. 4.3%). This is similar to the findings described by Petrov et al. (2022), who also found a decline with age. However, they observed a higher prevalence of crisis among men in their 40s, whereas our study found such a trend among men in their 50s, possibly reflecting a lingering midlife crisis, which is more frequently associated with men (see e.g., Hermans & Oleś, 1999; Oleś, 1995). Notably, Petrov et al. (2022) did not include participants aged 50-59 in their sample. Direct comparison with other studies (Millová & Svárovská, 2020; Shek, 1996; Yeler et al., 2021) is limited due to differing methodologies.

We also examined the effects of gender, age, and their interaction on DCQ-12 scores when treated as a continuous variable. A two-way ANOVA of the DCQ-12 scores confirmed the categorical analysis findings: the scores decreased with age and were generally lower in men. While the gender effect was statistically significant, it was relatively small and the gender-age interaction was negligible. Age had the strongest effect, with scores decreasing as age increased.

LIMITATIONS AND CONCLUSIONS

The findings of this study should be interpreted considering several limitations particularly relevant to the sample. Despite our best efforts, we were unable to achieve a more balanced age and gender distribution in the sample, which was predominantly composed of women and younger individuals. However, this sampling imbalance is less pronounced compared to previous studies on the psychometric properties of DCQ-12 (the Indonesian adaptation by Aprodita et al., 2024, and the original version by Petrov et al., 2022). Future research should aim to recruit more middle and later adulthood participants to address this issue and also focus on the analysis of invariance by gender and age.

Another limitation of this study is the inability to assess test-retest reliability. As stability over time is crucial in studying developmental crises (Petrov et al., 2022; Robinson, 2016), future research should address this gap.

A potential limitation is the reliance on self-report measures to assess criterion validity of the DCQ-12. Although we included various psychosocial factors, existing research suggests that more objective indicators, such as significant life events or transitions, play a crucial role in developmental crises (Petrov et al., 2022; Robinson & Stell, 2015). Therefore, future studies should focus on analyzing these objective factors in the context of developmental crises.

Despite these limitations, the Czech version of DCQ-12 shows significant potential for use, particularly in developmental psychology focused on adult development. One of its major strengths is its age inclusivity, which allows it to capture a range of developmental crises, not just specific ones such as the quarter-life or midlife crisis, making it a versatile tool in the study of adult developmental processes.

Supplementary materials are available on the journal's website.

Disclosures

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