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Is adjustment disorder unidimensional or multidimensional? Implications for ICD-11

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Abstract

In preparation for ICD-11, the adjustment disorder (AjD) diagnosis has undergone considerable revisions; however, the latent structure of AjD remains uncertain. It is unclear whether AjD is best represented as a unidimensional or multidimensional construct. This study performed a comprehensive assessment of the latent structure of AjD symptomatology and assessed its concurrent and discriminant validity. Individuals who experienced involuntary job loss (N = 333) completed a self-report measure of AjD symptoms. Seven alternative models of AjD were tested using confirmatory factor analysis. General psychological distress, impairment in social functioning, occupational self-efficacy, and sense of coherence were used as criterion variables for construct validity. In the confirmatory factor analysis, a bifactor solution with one dominant general AjD factor and 5 correlated group factors (preoccupation, failure-to-adapt, avoidance, affective reaction, and impulsivity) provided optimal fit. As expected, the AjD factor showed strong positive associations with general psychological distress and impairments in social functioning and moderately negative associations with occupational self-efficacy and sense of coherence. With regard to unidimensionality or multidimensionality of AjD symptoms, the current results indicate the plausibility of a unidimensional conceptualization. Future research should focus on essential key characteristics and a reduction of symptoms for the AjD definition.

KEYWORDS

adjustment disorder, bifactor model, confirmatory factor analysis (CFA), ICD-11

1 | INTRODUCTION

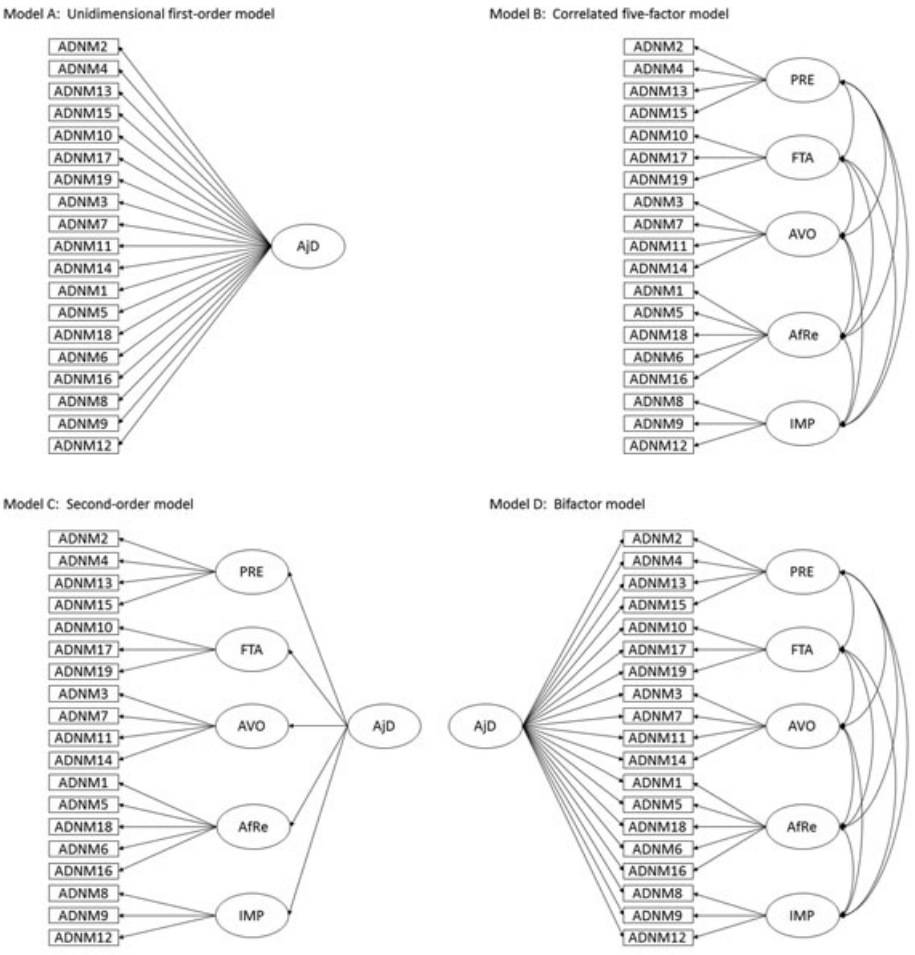
The World Health Organization's International Classification of Diseases, version 11 (ICD-11) will contain a revised definition of adjustment disorder (AjD; Maercker et al., 2013). AjD is defined as the development of emotional and behavioural symptoms in response to an external life stressor and will therefore be grouped within the disorders specifically associated with stress category (Maercker et al., 2013). The current proposal characterizes preoccupation (PRE) with the stressor and failure to adapt (FTA) symptoms as essential features of AjD (Keeley et al., 2016; Maercker et al., 2013). In addition to these core symptoms, the description of AjD also includes associated symptoms of avoidance, depression, anxiety, and impulsivity (Maercker et al., 2013).

During the revision process for ICD-11, a preliminary self-report questionnaire of AjD symptoms was developed: The *Adjustment Disorder - New Module* (ADNM; Einsle, Köllner, Dannemann, & Maercker, 2010). An exploratory factor analysis (EFA) analysis was initially performed on a pool of 29 items, and a six-factor solution emerged (PRE, FTA, avoidance, depression, anxiety, and impulsivity; Einsle et al., 2010). Based on these EFA results, the scale was shortened to include 19 symptom indicators plus an additional item that screens for functional impairment. Glaesmer, Romppel, Braehler, Hinz, and Maercker (2015) tested the factorial validity of the revised ADNM-20 among a representative sample of the German population. Using confirmatory factor analysis (CFA), three alternative models of the latent structure of the AjD symptoms were compared: (a) a unidimensional model, (b) a correlated six-factor model, and (c) a second-order model in which the correlations between the first-order factors are explained by a single AjD factor. All models exhibited acceptable fit results, and the authors favoured the six-factor solution. The correlations between the six factors ranged from .75 to .96 suggesting a high degree of similarity across these factors (Glaesmer et al., 2015). The latent structure of the ADNM-20 was also investigated within a representative sample of the Lithuanian population (Zelviene, Kazlauskas, Eimontas, & Maercker, 2017); however, support for the six-factor model was

limited. Although model fit results suggested that this solution provided a reasonable approximation of the data, the factor correlations were extremely high, with a number of factor correlations exceeding a value of 1. The very high level of association observed between the factors points towards the plausibility of a unidimensional structure (at either a first, or a second-order level); however, no such models were evaluated in this study.

The existing data provides evidence of multidimensionality and unidimensionality, thus further research is required to determine the exact nature of the latent structure of AjD symptoms. One solution to this problem may lie in the application of confirmatory bifactor modelling (CBM; Reise, 2012). CBM is a statistical process that allows researchers to model unidimensionality and multidimensionality simultaneously, and at the same conceptual level. CBM has many similarities to traditional second-order factorial models but is distinctive and advantageous in two ways. First, within a second-order factorial model, the relationship between the unidimensional factor (e.g., AjD) and the observable indicators (e.g., AjD symptoms) is indirect via the first-order factors (e.g., PRE), whereas, within a bifactor model, this relationship is direct (see Figure 1). Second, unlike a second-order model, CBM affords researchers the opportunity to determine whether the observed covariation between symptom indicators is due primarily to a single "general factor" (e.g., AjD), or due to multiple "group factors" (e.g., PRE and FTA) via inspection of the respective factor loadings. This process can therefore reveal whether a given construct is primarily unidimensional or multidimensional.

The uncertainty regarding the latent structure of AjD is problematic given the impending publication of ICD-11. There is a need to address the question of whether AjD should be viewed as a multidimensional or unidimensional construct given that knowledge on dimensionality has important implications regarding diagnosis. For example, it is of importance to know whether a cut-off score related to the number of symptoms has to be used, whether different symptom criteria for diagnosis are necessary, or whether certain symptoms need to be present within respective clusters. This study is therefore performed with two aims in mind: (1) to determine the factorial validity of AjD through a comprehensive assessment of a range of alternative (unidimensional and multidimensional) factorial solutions and (2) to determine the concurrent and discriminant validity of AjD through assessments of associations with a range of criterion variables. We expected AjD to show positive associations with general psychological distress and impairment in social functioning and to be negatively associated with the stress-coping resources of specific self-efficacy and sense of coherence.



Notes: AjD = Adjustment disorder; PRE = Preoccupation; FTA = Failure to Adapt; AVO = Avoidance; AfRe = Affective Reaction; IMP = Impulsivity; ADNM1-19 = measured variables. All models including error variances.

FIGURE 1 Alternative model structures of adjustment disorder symptoms

2 | METHOD

2.1 | Participants and procedure

The data used for the present analyses derived from the first wave of the Zurich Adjustment Disorder Study. The sample comprised of *N* = 333 participants who involuntarily lost their jobs within 9 months prior to participation. Participants were recruited in the greater Zurich area via local job agencies. The study was approved by the Ethics committee of the University of Zurich in June 2015, and all participants gave written informed consent before the assessment. Participants were excluded if they did not speak German fluently, were aged under 18 years, were unable to give written informed consent, or suffered from a severe mental illness. Gender was equally distributed across the sample (male: *n* = 170, 51.1%; female: *n* = 163, 48.9%). The mean age was 43.8 years (*SD* = 10.7) with the male subsample being slightly older (*M* = 45.0, *SD* = 10.5) than the female subsample (*M* = 42.5, *SD* = 10.8; *t*(331) = 2.16, *p* = .032, *d* = .024).

2.2 | Measures

The *Adjustment Disorder - New Module 20* (ADNM-20; Einsle et al., 2010) was used to assess AjD symptom severity. It is a self-report questionnaire comprised of a stressor list (19 stressful life events) and a symptom list (19 items, plus one item that reflects functional impairment). We used a contextualized version of the 19-item symptom list to measure all AjD symptoms with regard to the job loss. All items are answered on a 4-point Likert scale ranging from 1 (*never*) to 4 (*often*). The ADNM-20 has been validated in several studies regarding internal consistency, retest-reliability, and discriminant and concurrent validity (Bley, Einsle, Maercker, Weidner, & Joraschky, 2008; Einsle et al., 2010). The internal reliability of the ADMN-20 among the current sample was satisfactory (α = .93).

We used the *Brief Symptom Inventory*, *Short Form* (BSI-18; Spitzer et al., 2011) to measure general psychological distress. Eighteen items measure the syndromes *somatization, depression, and anxiety* on a 5-point Likert scale, ranging from 0 (*not at all*) to 4 (*very strong*). A higher sum score of all 18 items (General Severity Index, GSI) indicates higher psychological distress. The German short version showed satisfying psychometric properties with regard to factorial validity, internal consistency, retest-reliability, and discriminant and concurrent validity (Franke et al., 2011; Spitzer et al., 2011). The internal consistency in this study was α = .88.

The *Social Functioning Questionnaire* (SFQ; Tyrer et al., 2005) was used to assess perceived social function. As we were not aware of an existing German version, we translated the English version in a translation-back translation process. It consists of eight items covering work and home tasks, financial concerns, relationships with family, sexual activities, social contacts, and spare time activities as domains of functioning. The item format is a 4-point Likert scale with different labels for each question. A higher score indicates higher impairment in social functioning. The SFQ showed satisfying results with regard to retest reliability and concurrent validity (Seivewright, Tyrer, & Johnson, 2004; Tyrer et al., 2005). The internal consistency in this study was α = .76.

The *Occupational Self-Efficacy Scale* (OcSe; Schyns & Collani, 2002) measured self-efficacy with regard to challenges in the work context. The eight items are answered on a 6-point Likert scale ranging from 1 (*not at all true*) to 6 (*completely true*) and the total score is obtained by summing up all items. The factorial validity, internal consistency, and concurrent and discriminant validity have been supported in previous studies (Rigotti, Schyns, & Mohr, 2008; Schyns & Collani, 2002). The internal consistency in this study was α = .88.

We used the *Sense of Coherence Scale—Revised* (SOC-R; Bachem & Maercker, 2016) to measure sense of coherence. Thirteen items measure on a 5-point Likert scale, ranging from 1 (*not at all*) to 5 (*completely*), the three facets of *manageability*, *reflection*, *and balance*. The total score is obtained by summing up all variables. Two validation studies showed factorial validity, satisfying internal consistency, and concurrent and discriminant validity (Bachem & Maercker, 2016; Mc Gee, Hoeltge, Maercker, & Thoma, 2017). The internal consistency in this study was α = .68.

2.3 | Statistical analysis

In total, seven alternative models of the ADNM-20 were evaluated. As a first step, we established the optimal factorial solution on a first-order level by comparing four first-order (correlated) factor models. On the basis of these results, we estimated a second-order model to explain the covariations at the first-order level. Furthermore, two bifactor models were tested in order to recognize the distinction between a fully restricted and unrestricted bifactor conceptualization (Hyland, 2015). In an unrestricted bifactor model, the group factors are free to correlate with each other, whereas in the fully restricted bifactor model, the correlations between the group factors are constrained to zero. Importantly, in both the restricted and unrestricted bifactor models, the group factors are uncorrelated with the general factor.

First-order factor models: Model 1 is a single factor solution in which all 19 items load on an 'adjustment disorder' factor (see Figure 1, Model A). *Model 2* distinguished between a 'core symptom' factor (seven items: PRE and FTA) and an 'accessory symptom' factor (12 items: avoidance, depression, anxiety, and impulsivity). *Model 3* represented the basic six-factor model with each symptom group as a separate factor (PRE, FTA, avoidance, depression, anxiety, and impulsivity). In *Model 4*, the depression and anxiety factors were combined into a single factor ('affective reaction') whereas the structure of Model 3 was maintained (see Figure 1, Model B).

Second-order factor models: Model 5 included one second-order factor (AjD) to explain the factor correlations between the best-fitting first-order model (see Figure 1, Model C).

Bifactor models: Model 6 was an unrestricted (correlated general factors) bifactor model that included one general factor (AjD) in addition to the factors identified by the best fitting first-order model (see Figure 1, Model D). *Model 7* was a restricted variation of Model 6, in which the group factors were uncorrelated.

All models were tested using Mplus, version 7.4 (Muthén & Muthén, 2012) using the robust weighted least squares, mean- and variance-adjusted (WLSMV) estimator (Joreskog, 1994; Muthén, du

Toit, & Spisic, 1997). The WLSMV has been demonstrated to produce accurate parameter estimates, standard errors, and test-statistics when ordinal indicators are used (Flora & Curran, 2004). Standard recommendations for assessing model fit were followed (Hu & Bentler, 1999), whereby acceptable model fit is indicated by a chi-square to degree of freedom ratio (χ^2:df) of less than 3:1 (Kline, 2005); comparative fit index (CFI; Bentler, 1990) and Tucker-Lewis index (TLI; Tucker & Lewis, 1973) values greater than .90; root mean square error of approximation with 90% confidence intervals (RMSEA 90% CI) value less than .08 (Steiger, 1990); and a weighted root mean square residual (WRMR) values less than 1 (Yu, 2002). Importantly, the CFI and the RMSEA include penalties for model complexity.

In order to assess concurrent and discriminant validity of the resulting model, we computed the unique partial correlations between each latent variable and the four manifest criterion variables.

3 | RESULTS

3.1 | Descriptives

Participant scores on the ADNM-20 were *M* = 41.9 (*SD* = 12.8, Mdn = 41.0, range = 20–76), with women (*M* = 44.0, *SD* = 13.0) on average scoring higher than men (*M* = 39.9, *SD* = 12.2; $p < .01$, $d = 0.33$). According to a diagnostic algorithm (Glaesmer et al., 2015), 26.7% (*n* = 89) of the sample met the criteria for a tentative diagnosis of AjD (women: 33.7%; men: 20.0%). Age was associated with higher symptomatology ($r = .16$, $p < .01$). Table 1 provides information on the frequencies for each item category of the ADNM-20. The means of the criterion variables were *M* = 7.2 (*SD* = 7.2, Mdn = 5.0, range = 0–43) for the general psychological distress, *M* = 6.2 (*SD* = 4.0, Mdn = 6.0, range = 0–19) for the impairment in social functioning, *M* = 27.6 (*SD* = 5.5, Mdn = 29.0, range = 6–36) for the occupational self-efficacy,

TABLE 1 Item category frequencies for the ADNM-20 (*N* = 333)

	Scale value				
Item content	1 Never (%)	2 Rarely (%)	3 Sometimes (%)	4 Often (%)	% Missing
Preoccupation					
ADNM2. I have to think about the job loss repeatedly.	12.3	22.8	36.0	28.2	0.6
ADNM4. I have to think about the job loss a lot and this is a great burden to me.	21.9	29.7	32.7	15.0	0.6
ADNM13. I constantly get memories of the job loss and cannot do anything to stop them.	30.3	32.4	27.3	9.6	0.3
ADNM15. My thoughts often revolve around anything related to the job loss.	32.4	42.3	20.1	4.2	0.9
Failure to adapt					
ADNM10. Since the job loss, I find it difficult to concentrate on certain things.	37.5	33.3	23.1	6.0	0
ADNM17. Since the job loss, I do not like going to work or carrying out the necessary tasks in everyday life.	41.7	31.2	19.5	7.2	0.3
ADNM19. Since the job loss, I can no longer sleep properly.	42.0	26.4	19.8	11.1	0.6
Avoidance					
ADNM3. I try to avoid talking about the job loss whenever possible.	27.6	35.4	23.4	13.2	0.3
ADNM7. I avoid certain things that might remind me of the job loss.	47.1	27.3	16.5	8.7	0.3
ADNM11. I try to dismiss the job loss from my memory.	38.1	25.5	18.9	17.1	0.3
ADNM14. I try to suppress my feelings because they are a burden to me.	35.4	31.8	23.7	8.7	0.3
Affective reaction					
ADNM1. Since the job loss, I feel low and sad.	11.4	29.4	47.1	12.0	0
ADNM5. I rarely do those activities, which I used to enjoy anymore.	45.6	23.7	18.3	11.4	0.9
ADNM18. I have been feeling dispirited since the job loss and have little hope for the future.	34.8	31.5	24.6	8.7	0.9
ADNM6. If I think about the job loss, I find myself in a real state of anxiety.	52.9	25.8	16.5	4.5	0.3
ADNM16. Since the job loss, I am scared of doing certain things or of getting into certain situations.	50.5	24.9	18.6	5.7	0.3
Impulsivity					
ADNM8. I am nervous and restless since the job loss.	23.4	37.8	28.2	10.2	0.3
ADNM9. Since the job loss, I lose my temper much quicker than I used to, even over small things.	38.7	32.1	21.0	7.8	0.3
ADNM12. I have noticed that I am becoming more irritable due to the job loss.	37.5	31.5	24.3	6.0	0.6
Functional impairment					
ADNM20. Overall, the situation causes serious impairment in my social or occupational life, my leisure time, and other important areas of functioning.	24.6	40.5	23.1	11.4	0.3

and M = 50.0 (SD = 5.3, Mdn = 50.0, range = 27–65) for sense of coherence. Compared to men, women reported higher general psychological distress (women: M = 8.2, SD = 7.6; men: M = 5.9, SD = 6.6; $p < .01$, d = 0.32), higher impairment in social functioning (women: M = 6.7, SD = 4.1; men: M = 5.7, SD = 3.8; $p < .05$, d = 0.25), and lower occupational self-efficacy (women: M = 26.6, SD = 5.9; men: M = 28.6, SD = 5.0; $p < .01$, d = 0.37). There were no gender differences in sense of coherence (women: M = 50.0, SD = 5.3; men: M = 50.0, SD = 5.26).

TABLE 2 Fit indices for alternative models of the structure of adjustment disorder (N = 333)

Model	χ^2	df	CFI	TLI	RMSEA (95% CI)	WRMR
First-order factor models						
1	817.672	152	.909	.898	.115 (.107–.122)	1.713
2	788.718	151	.913	.902	.113 (.105–.120)	1.679
3	407.621	137	.963	.954	.077 (.068–.086)	1.079
4	421.028	142	.962	.954	.077 (.068–.085)	1.111
Second-order factor model						
5	499.171	147	.952	.944	.085 (.077–.093)	1.263
Unrestricted bifactor model						
6	**259.260**	**123**	**.981**	**.974**	**.058 (.048–.067)**	**.774**
Restricted bifactor model						
7[a]	363.616	133	.969	.960	.072 (.063–.081)	1.030

Note. All χ^2 statistics were significant. CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root-Mean Square Error of Approximation; WRMR = Weighted Root Mean Square Residual. The selected model is displayed in bold.

[a]Heywood Case

3.2 | CFA

The results of the CFA can be found in Table 2. Models 1–6 converged normally, whereas Model 7 included one negative residual variance on item ADNM11. Amongst the first-order factor models, Models 1 and 2 yielded unsatisfactory fit estimates, whereas Models 3 and 4 were found to provide a reasonable approximation of the data. Inspection of the factor correlations between the depression and anxiety factors in Model 3 revealed an extremely high level of association between these factors (r = .96). Model 4, which combined the depression and anxiety factors into a single latent variable, was therefore preferred on the grounds of parsimony and interpretability.

The second-order model, Model 5, also yielded reasonable fit estimates; however, these were slightly worse than Models 3 and 4. Model 6, the unrestricted bifactor solution that contains one general AjD factor, and five correlated group factors (PRE, FTA, avoidance, affective reaction, and impulsivity), exhibited excellent model fit across the majority of indices. This suggested that Model 6 provided the best fit of the data (see Figure 1, Model D).

3.3 | Standardized factor loadings

Standardized factor loadings for Model 6 are presented in Table 3. The pattern of factor loadings indicated the dominance of a general factor

TABLE 3 Standardized factor loadings (standard error) for the unrestricted bifactor model (Model 6)

Item	AjD	PRE	FTA	AVO	AfRe	IMP
ADNM2	0.620 (.046)	0.497 (.056)				
ADNM4	0.815 (.029)	0.365 (.054)				
ADNM13	0.769 (.034)	0.427 (.061)				
ADNM15	0.774 (.030)	0.243 (.057)				
ADNM10	0.770 (.034)		0.344 (.067)			
ADNM17	0.645 (.041)		0.349 (.070)			
ADNM19	0.750 (.029)		0.103(.070)[†]			
ADNM3	0.326 (.054)			0.357 (.070)		
ADNM7	0.730 (.033)			0.359 (.059)		
ADNM11	0.509 (.053)			0.680 (.078)		
ADNM14	0.696 (.035)			0.307 (.058)		
ADNM1	0.728 (.033)				0.039 (.060)[†]	
ADNM5	0.661 (.038)				0.158 (.077)*	
ADNM18	0.758 (.033)				0.430 (.096)	
ADNM6	0.807 (.029)				−0.098 (.071)[†]	
ADNM16	0.726 (.033)				0.220 (.079)**	
ADNM8	0.790 (.027)					0.269 (.055)
ADNM9	0.654 (.041)					0.650 (.068)
ADNM12	0.666 (.040)					0.545 (.059)

Note. All $p > .001$, unless indicated. ADNM = Adjustment Disorder - New Module; PRE = preoccupation; FTA = failure to adapt; AVO = avoidance; AfRe = affective reaction; IMP = impulsivity.

*$p < .05$;

**$p < .01$;

[†]not significant.

TABLE 4 Factor correlations in the unrestricted bifactor model (Model 6)

	1. PRE	2. FTA	3. AVO	4. AfRe
1. PRE	1			
2. FTA	−.702**	1		
3. AVO	.192	−.534**	1	
4. AfRe	−.703***	.642***	−.121	1
5. IMP	−.223	.305*	−.185	−.213

Note. PRE = preoccupation; FTA = failure to adapt; AVO = avoidance; AfRe = affective reaction; IMP = impulsivity.

*$p < .05$;

**$p < .01$;

***$p < .001$.

of AjD. All items loaded onto the general factor in a consistent manner; each item was positive, statistically significant ($p < .001$), and of a robust magnitude. Furthermore, 16 of the 19 items possessed stronger factor loadings on the general factor than on the respective group factors; one item exhibited a marginally stronger loading on its group factor compared to the general factor; and two items possessed factor loadings of equal magnitude on the general and group factors. Overall, the results of Model 6 strongly favoured the interpretation of a unidimensional, rather than multidimensional, latent structure of the ADNM-20.

3.4 | Factor correlations

Table 4 displays the factor correlations for Model 6. PRE correlated strongly with FTA and affective reaction; FTA correlated moderately with avoidance and affective reaction; and all other correlations were weak. Most notably, after controlling for the general AjD factor, the relationship between the core symptom clusters of PRE and FTA was negative ($r = −.70$).

3.5 | Concurrent and discriminant validity

The concurrent and discriminant validity results can be found in Table 5. The general factor of AjD correlated significantly, strongly, and positively with psychological distress and impaired social functioning. Additionally, AjD correlated significantly, negatively, and moderately with occupational self-efficacy, and sense of coherence. The five group factors exhibited relatively weak correlations with each of the criterion variables, and many of these effects were non-significant.

4 | DISCUSSION

Given the impending publication of ICD-11, this study aimed to explore the latent structure of adjustment disorder comprehensively and to elaborate further on the question whether this construct is best conceived as unidimensional or multidimensional. The results of the CFA indicate that a bifactorial structure of AjD symptoms fit the data best. It included the two core symptom groups of PRE and FTA, in addition to the three accessory symptoms groups reflecting avoidance, affective reaction, and impulsivity, plus one general factor that explained covariation across all 19 AjD symptoms. The factor loadings pointed towards the dominance of the general factor and thus towards a rather unidimensional conceptualization of the construct.

An important finding from the current analyses was that the first-order model performed equally well when the anxiety and depression factors were combined into a single 'affective reaction' factor. Inclusion of a single affective reaction factor not only leads to a more parsimonious account of the latent structure of AjD symptoms but also is consistent with previous findings (Einsle et al., 2010; Glaesmer et al., 2015; Zelviene et al., 2017).

A number of interesting findings emerged from the bifactor model results post controlling for the AjD factor: (1) a significant *negative* association between PRE and FTA, and between PRE and affective reaction; (2) a *negative* correlation between PRE and psychological distress, and between PRE and impairment in social functioning; and (3) a *positive* correlation between PRE and sense of coherence. This may suggest that what is left behind in PRE, after the shared AjD variance is accounted for, might reflect an adaptive psychological response to stress. This emphasizes the need to focus on functional impairment associated with, in particular, the PRE symptoms. Only in situations when PRE is associated with clear functional impairment should these experiences be interpreted as maladaptive. The difficulty of identifying functional impairment in AjD has already been discussed within a case vignette study in preparation for ICD-11 (Keeley et al., 2016). In a future revision of the scale, it might be beneficial to expand the measurement of functional impairment in order to make better assumptions about diagnostic status.

The analysis with regard to concurrent and discriminant validity of AjD demonstrated that the general AjD factor was strongly correlated with psychological distress and social functioning, and moderately associated with occupational self-efficacy and sense of coherence. Some earlier research on the construct validity of the new AjD definition has shown

TABLE 5 Partial correlations between the latent factors in the unrestricted bifactor model (Model 6) with external criterion variables: concurrent and discriminant validity

	AjD	PRE	FTA	AVO	AfRE	IMP
General psychological distress	.647***	−.220***	−.009	−.106	.169*	−.129*
Impairment in social functioning	.635***	−.311***	.330***	−.068	.387***	.013
Occupational self-efficacy	−.391***	.129	−.266**	.066	−.435***	.075
Sense of coherence - revised	−.204***	.206**	−.016	.111	−.116	.182**

Note. AjD = adjustment disorder; PRE = preoccupation; FTA = failure to adapt; AVO = avoidance; AfRe = affective reaction; IMP = impulsivity.

*$p < .05$;

**$p < .01$;

***$p < .001$.

moderate associations with anxiety and depression (Einsle et al., 2010), and weak associations with coping behaviour (Bley et al., 2008; Einsle et al., 2010), as well as differences in general self-efficacy between patients with and without a tentative diagnosis of AjD (Bley et al., 2008). The current associations with the criterion variables are in the expected directions and support the construct validity of AjD.

There are some limitations with this study. First, the data derived from a very specific, and homogenous sample, which limits the generalizability of the results. This sample allowed us to investigate the latent structure of AjD in a sample in which we expected higher occurrence of AjD symptoms and that experienced a prototypical precipitating life event. However, there is a need for further investigation in other populations and representative samples. Second, this study was based on a cross-sectional assessment. The stability over time of the latent structure and the predictive validity of AjD need to be investigated in future studies. Third, it will be important for future work to attempt to replicate this study using clinician-administered diagnostic tools as the method of assessment may impact upon the reporting of symptoms and thus may influence which factorial model best fits the data.

Several findings of this study pointed in the direction of the unidimensionality of AjD. The ADNM-20 is a preliminary questionnaire for AjD symptoms offering the possibility to investigate a wide range of possible AjD symptoms, but it is not exhaustive, and it is not based on the definite, still outstanding diagnostic criteria of AjD for ICD-11. One of the guiding principles of the upcoming ICD-11 is to simplify diagnoses wherever possible by focusing on core symptoms to improve clinical utility (First, Reed, Hyman, & Saxena, 2015). In order to adhere with these standards, considerable revisions that would serve to simplify the definition of AjD would be beneficial. In light of the probable rejection of subtypes in ICD-11 (Maercker et al., 2013), a focus on essential key characteristics of AjD could improve the validity and utility of the diagnosis. The findings of the present analysis could indicate that there is a better fitting, more parsimonious solution based on a smaller amount of symptoms.

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DECLARATION OF INTEREST STATEMENT

The authors have no conflicts of interest to declare.

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