

Beyond job insecurity – Concept, dimensions, and measurement of precarious employment

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ABSTRACT

Although precarious employment is a salient topic in both the societal and the scientific discourse, it has received limited consideration in the field of psychology. This study aimed at developing a psychological perspective on the topic rooted in sociological theory by classifying subjective experiences of precarious employment and developing a suitable measure. Following a thorough literature search, we chose the multidimensional concept by Klaus Dörre and colleagues as a comprehensive definition. We operationalized their five dimensions (reproductive-material, social-communicative, legal-institutional, status and recognition, meaningful-subject-related) and tested the „Subjective Experience of Work-related Precariousness (SEWP)“ scale in two preliminary validation studies ($n_1 = 268$, $n_2 = 216$). Results on the psychometric properties of the SEWP scale and its associations with both health-related outcomes and work-related behavior suggest a comprehensive, reliable, valid, and economic measurement of precarious employment. Finally, we discuss current strengths and weaknesses of this new measure under development and line out avenues for future research.

Keywords

Precarious employment flexibility – atypical employment – precarity – measurement – health – work behavior

Changes in the labor market have increasingly led to the disappearance of structured and secure employment contracts (standard employment) and given rise to more flexible and unstructured forms of employment (atypical employment) instead (Eurofound, 2018). This transformation of the character of paid work since the mid-1990s was driven by globalization, the opening up of markets, and associated political deregulation. As a consequence, continuous restructuring processes are taking place in companies in order to react flexibly to market developments. However, restructuring is accompanied by negative impacts on the health of employees, organizations, and communities (Kieselbach et al., 2009). The development and widespread use of new information and communication technologies (ICT) at the end of the 20th century also enabled work to be carried out with greater flexibility. Ubiquitous permanence of ICT now allows work tasks to be fulfilled any time and any place, i.e., detached from the workplace and working hours (Rosa, 2005).

This socio-political development from structured to flexible working environments open up opportunities and benefits for employees on the one hand (such as increased autonomy, improved well-being and life-domain balance within telework or flexible working time arrangements; Joyce, Pabayo, Critchley & Bambra, 2010). On the other hand, flexible working environments introduce new risks in terms of work-related precariousness (Benach, Vives, Tarafa, Delclos & Muntaner, 2016; Vives et al., 2010), especially when flexibility requirements are high (Höge & Hornung, 2015) and individual control (autonomy) over flexible arrangements is low (Glaser & Palm, 2016).

Standard or „normal“ employment relationships (Benach & Muntaner, 2007; Mückenberger, 1985) are characterized by permanent full-time employment with secure income, full integration into social systems, identity of work and employment relationships, as well as employees being bound by instructions. A shift towards atypical employment relationships is

¹ Christian Seubert and Lisa Hopfgartner have contributed equally to this research and the current paper; they therefore share first authorship.

currently taking place, which differ from standard employment in at least one characteristic, e.g., flexible working hours and locations, a reduction in full-time and increased part-time work, fixed-term work, labor leasing, dependent self-employment (Eurofound, 2018). In addition, new forms of employment emerge continuously, such as employee sharing, job sharing, casual work, ICT-based mobile work, crowd employment, collaborative employment (Eurofound, 2015). The shift from standard to atypical employment is often associated with work-related precariousness or precarious employment (Benach & Muntaner, 2007). Although precarious employment is a salient topic in both the societal and the sociological scientific discourse, there is no generally accepted definition hitherto. Furthermore, contributions from the field of psychology to the topic remain scarce. This study aimed at the development of a psychological perspective on precarious employment by classifying subjective experiences of precarious employment and developing a suitable measurement instrument. First, we provide a review of the (predominantly sociological) scientific literature focusing on precarious employment. Following Brinkmann, Dörre, Röbenack, Kraemer and Speidel (2006) and Dörre (2005), we defined precarious employment as deficiencies that arise from the conditions of employment on five dimensions. Second, we constructed a self-report survey instrument for all five dimensions that measures subjective experiences of work-related precariousness. In this paper, we report results of two preliminary validation studies of this new instrument under development.

Precarious employment: Definitions and concepts

In everyday language, the term „*precarious*“ is often used synonymously to indicate uncertain, revocable, or tricky matters. The origin of the word can be traced back to Roman law, in which the *precarium* denoted an object or a right transferred with the possibility of restitution at any time (Buckland & Stein, 1963). Scientific research on precarity in Europe was stimulated by French sociologists Pierre Bourdieu and Robert Castel. Bourdieu (1998), a representative of neo-Marxism, describes precarization as a process of social change that leads to general social insecurity and is triggered by the economic and the labor system. This social change not only has a disciplining effect on those directly affected, but also leads to subjective insecurity among those who are not (yet) precariously employed (Dörre, 2011). Precarity in Bourdieu’s sense refers to a very broad, political construct considered too vague for scientific analysis (Brinkmann et al., 2006). Castel (2000), a scholar of work and industrial sociology, describes precarization as a profound transformation of working

societies, marked by the return of unfavorable forms of wage labor previously assumed to have been overcome. A much-renowned approach by Castel (2000) divides the working society into different „zones“: (1) zone of integration, (2) zone of precariousness, (3) zone of disaffiliation. For German sociologist Dörre and colleagues (e.g., Brinkmann et al., 2006; Dörre, 2005; Kraemer, 2008), this zone model served as a heuristic basis for the scientific analysis of precarious employment. Rodgers (1989) defined precarious employment on the basis of four dimensions: (1) degree of certainty of continuing work; (2) control over work (e.g., working conditions, wage, pace of work); (3) legal and social protection (e.g., against discrimination, unfair working conditions as well as unemployment, health and pension insurance); (4) adequacy of income. This approach was elaborated by various researchers, leading to a multitude of definitions and studies on precarious employment in Europe (for an overview see Betti, 2018). While Rodgers (1989) relies largely on objective or structural aspects of the employment relationship to define precarious employment, Castel’s (2000) definition mainly includes subjective aspects of social integration through work. Therefore, existing concepts of precarious employment may be classified by their primary focus on objective aspects, subjective aspects, or a combination of both. For a detailed discussion of these concepts in Europe and their relationships see Hopfgartner (2019).

Five dimensions of precarious employment

As a result of a comprehensive review of the above concepts, we chose to draw upon the work by Dörre (2005) and Brinkmann et al. (2006) for three reasons. First, these authors have grounded their approach in subjective aspects associated with precarious employment. Since we aim at developing a psychological perspective on this topic, our primary focus is on investigating subjective experiences that characterize work-related precarity. Second, within this domain of the subjective, these authors offer the most differentiated of the theoretical approaches investigated. To conceptualize precarious employment as comprehensively as possible, we opted for the most fine-grained approach. Third, the model of these authors strongly relates to the other concepts, providing a suitable synopsis (Hopfgartner, 2019). Dörre (2005, p. 252) suggests the following definition of precarious employment:

An employment contract can be labeled precarious if employees’ levels of income, protection, and integration clearly fall below a standard defined and agreed upon by the current society. Job insecurity and wages below the subsistence level are (...) central indicators of precarity. Loss of

meaning, social isolation, status insecurity, lack of recognition, and planning deficits represent precarization tendencies that primarily reflect a perspective of [impeded] self-realization in specific work activities.²

In accordance with the living wage concept (e.g., Carr, Parker, Arrowsmith & Watters, 2016; Shelburne, 1999), this definition includes economic subsistence as a central indicator and considers other factors necessary to capture the multifaceted nature of precarious employment, including meaningful participation at the workplace and in society. Based on this definition, Brinkmann et al. (2006) proposed five dimensions of precarious employment.

1. Reproductive-material dimension. The first dimension relates primarily to income from work employment and aspects of job insecurity. Both constituents directly relate to (financial and material) uncertainty about the future. An income is regarded as precarious if it does not secure one's livelihood and falls below a culturally defined minimum. In terms of economic subsistence, an objective criterion often used is the relative poverty threshold, i.e., an income below a certain reference income level. In the EU, this threshold is defined as income below 60 % of the national median for full-time employment (Eurostat, 2018). In Austria, for example, the at-risk-of-poverty threshold was about 14851 € (net) for a one-person household in 2017, which is a monthly income of 1238 € (Statistik Austria, 2018). Both a low income and job insecurity may impede long-term life planning due to an unstable financial situation. Regarding the subjective component of job insecurity, research shows that mere concerns about job continuance can have a negative impact (Dekker & Schaufeli, 1995) on health and well-being (de Witte, Pienaar & de Cuyper, 2016) and on work-related behavior, especially behaviors related to organizations (Sverke, Hellgren & Näswall, 2002). It is therefore assumed that precarious employment, in the sense of an insecure reproductive-material situation, is negatively related to health and work-related behavior.

2. Social-communicative dimension. The second dimension covers both integration into social networks at the workplace and work-related aspects of communication. An employment relationship can be described as precarious if equal integration in the workplace is denied and work-related communication is impeded. Social support by colleagues and supervisor has been confirmed as a protective factor in numerous studies (e.g., Kurtessis et al., 2017). Further, a connection between social inclusion and health has long been established (House, Landis & Umberson, 1988)

and, conversely, a recent study found social isolation to be associated with poorer health among teleworkers (Bentley et al., 2016). Following social exchange theory (Blau, 1964), lack of social support leads to counterproductive work behavior due to the reciprocity between organizational-social conditions and work-related behavior (Biron, 2010). Greenhalgh (1979) describes the so-called „disinvolvement syndrome“ as a behavior-based strategy to deal with uncertainty by reducing engagement. It is therefore assumed that the social-communicative dimension of precarious employment is negatively associated with health, well-being, and voluntary, extraproductive work behavior, and positively associated with counterproductive work behavior.

3. Legal-institutional (participation) dimension. The third dimension relates to legal aspects of labor and social security (e.g., health and pension insurance, company agreements) as well as health and safety at work. In addition, this dimension includes aspects of employee participation and co-determination as well as opportunities for vocational training and career promotion. An employment relationship is precarious in this respect if labor and social security legislation applies to a limited extent only, therefore excluding a person from protection by means of his or her employment contract. Legal protective regulations apply without restriction only to standard employment. With increasing distance to the standard employment relationship, protective regulations are decreasing (Eurofound, 2015, 2018). So far, scientific studies on the connection between (dis)integration into social security systems and subjective experience of work-related precariousness are lacking. Debus, Probst, König and Kleinmann (2012) found a buffering effect of different social security systems (characterized by extent of unemployment insurance and access to further training) on the negative relationship between job insecurity and both job satisfaction and commitment. Studies on temporary agency work have shown a lack of opportunities for employee participation, in addition to disadvantages in labor protection and social security (Mitlacher, 2008). Furthermore, there is some evidence that temporary employment is negatively related to health and organizational commitment (de Cuyper et al., 2007). It is therefore expected that, under conditions of precarious employment, there will be a negative correlation between disadvantages in labor protection or social security and employee health. It is also assumed that a lack of opportunities for participation will have a negative impact on work behavior (Weber, Unterrainer & Schmid, 2009).

4. Status and recognition dimension. The fourth dimension refers to recognition and appreciation gained

² Translation by the authors; square brackets indicate omissions or insertions by the authors.

in and from work. An employment relationship can be described as precarious in relation to this dimension if one's work is less recognized and valued by personally relevant people and groups. A stable employment is an important basis for the formation of social relationships with colleagues and clients, which in turn provide sources for status, recognition, and personality development (Jahoda, Lazarsfeld & Zeisel, 1975). Recognition is an important basis for the development of self-esteem (Honneth, 2001) and the formation of identity (Sennett, 2001). Because precarious work is generally seen as an undesirable form of employment, it is associated with less recognition or appreciation by others and therefore contributes little to the formation of an individual (vocational) identity. This often results in compensating behavior, such as seeking need satisfaction in substitutional sources of identity and status (e.g., consumption; Bauman, 2005). Additionally, it is known that an imbalance between effort at work and received rewards (Siegrist, 1996) leads to negative consequences for health and well-being (e.g., Rugulies, Aust & Madsen, 2017). According to equity theory (Adams, 1965), people compare their work input and the appreciation and recognition received for it (output) with the input and output of their colleagues. If inequality is perceived in this comparison, people adapt their input (e.g., by reducing their commitment) in order to restore balance. It is therefore expected that a lack of recognition and appreciation in precarious employment is associated with impaired health and well-being and with reduced extraproductive and increased counterproductive work behavior.

*5. Meaningful-subject-related dimension.*³ The fifth dimension refers to experienced meaningfulness and fulfillment at and through work, as well as the degree of identification with a particular employment or work activity. An employment relationship can therefore be described as precarious if it is accompanied by a permanent perception of loss of meaning and lack of identification with one's work. Experiencing the presence of meaning includes dimensions of comprehension, purpose, and significance, which can be fed by various sources, of which the most important might be family and work (Steger, 2018). Meaning in work can be understood as the subjective experience of meaningfulness (Hackman & Oldham, 1976; Schnell, Höge & Pollet, 2015), which is positively related to work engagement (Fairlie, 2011) and well-being (Arnold, Turner, Barling, Kelloway & McKee, 2007). A lack of meaning and identification with work is therefore assumed to be negatively related to well-being and health. A relation between the meaningful-subject-

related dimension and work-related behavior is also expected (Allan, Batz-Barbarich, Sterling & Tay, 2019).

The five dimensions should not be viewed in isolation but as mutually interacting with each other. Therefore, empirical investigations should consider all five dimensions. However, a certain order of precedence is suggested by Dörre's (2005) definition of precarious employment (see above). Accordingly, the reproductive-material dimension with the elements of low wages and job insecurity is at the core of precarious employment, whereas the other four refer to meaningful organizational participation and social integration.

Measurement of precarious employment

The considerations set out above form the theoretical basis of a new self-report measure for the assessment of *subjective experiences of work-related precariousness* (SEWP). We aimed at developing a questionnaire instrument suitable for quantitative research based on the comprehensive five-dimensional concept of precarious employment outlined above. The employment precariousness scale (EPRES, Vives et al., 2010) seems to be one of the first quantitative, multidimensional instruments to measure precarious employment. However, the EPRES applies a different theoretical approach (Rodgers, 1989) where subjective experiences are not a main focus. In addition, the scale blends different sets of frequency response scales as well as interval, ordinal and categorical response formats and uses different item numbers per subscale. As a consequence, a first precondition in constructing the SEWP scale was to employ a balanced number of items per dimension and use uniform response formats across all dimensions. So far, most studies on precarious employment focus on the instability of employment and therefore fail to cover the phenomenon of precarious employment and its associated risks in a comprehensive way (Puig-Barrachina et al., 2014). Schaufeli (2016) also argues that future research on job insecurity should include psychological mechanisms, the impact of new forms of work, country-specific differences in social security systems, and organization-specific influences. By constructing the SEWP scale, we thus answer the call for a more comprehensive approach in measuring subjective experiences associated with precarious employment.

³ While Brinkmann et al. (2006) refer to the fifth dimension as „work content-related“, other publications use the more tangible label „meaningful-subject-related“ for the same dimension (Dörre, Kraemer & Speidel, 2004; Kraemer, 2008; Kraemer & Speidel, 2004). We opted to use the latter term throughout this paper.

Method

Development of the SEWP scale

The SEWP scale was developed in a three-step process: First, based on a content analysis of the defining elements of each of the five dimensions, an initial set of 32 items was generated. We then subjected these items to a qualitative preliminary study with five participants of diverse forms of employment, using the cognitive survey method (Collins, 2003) to optimize items in terms of clarity, comprehensibility, and redundancy. Second, the resulting 25 items were tested in validation study 1 together with related measures. In this study, we invited students of the University of Innsbruck who were in employment to fill in an online questionnaire. Third, after taking into account the results of the first validation study, we generated two additional items and tested the 27-item instrument in validation study 2. In this study, we targeted the general working population by snowballing. We subjected the item pools of both studies to quantitative analysis and optimized each dimension of the scale, considering reliability of measurement, content validity, and factorial validity. In this paper, we report findings that draw upon the resulting 15-item scale.

Participants

In study 1, we recruited $n_1 = 268$ participants (74.6 % female, mean age: 26.0 ± 6.7 years, working hours: 19.0 ± 10.7 hours per week, median net income: 700 € per month, mean job tenure: 3.1 ± 1.1 years, level of education: 85.5 % qualified for university, extent of employment: 15.5 % full-time, 54.1 % part-time, 30.2 % marginal). In study 2, we recruited $n_2 = 215$ participants (54.9 % female, mean age: 32.7 ± 8.2 years; working hours: 35.0 ± 9.5 hours per week, median net income: 2000 € per month, mean job tenure: 3.9 ± 4.8 years, level of education: 94.8 % qualified for university, extent of employment: 77.9 % full-time, 16.0 % part-time, 6.1 % marginal). Across both studies, we therefore included $N = 481$ participants.

Measures

Subjective experience of work-related precariousness was measured with 5 dimensions of the newly developed SEWP instrument. All 15 items (3 per dimension), used the introduction „Due to my employment situation ...“ as a cognitive anchor. Each item was assessed on two different 5-point response scales: (1) perceived *applicability* of the respective aspect to one's situation („To what extent does this apply?“, 1 = *not at all*

to 5 = *completely*), (2) *strain* experienced as a result of the respective aspect („Do you feel burdened by this?“, 1 = *not at all* to 5 = *very much*). Drawing on the „Belastungs-Beanspruchungskonzept“ (concept of work load and strain; Rohmert & Rutenfranz, 1975), we aimed at focusing on both the aspect of perceived applicability („Belastung“) and the associated perceived burden („Beanspruchung“). Mean scores were calculated for each dimension and for a global scale comprising all items (cf. Table 1 for summary descriptive statistics; item wordings of the current version of the measure are available from the authors upon request). To examine how the SEWP scale relates to important consequences of precarious employment, we included measures of psychological and physical health as well as work-related behavior.

Subjective well-being was measured with the WHO-5 Index (WHO, 1998). The WHO-5 comprises 5 items (sample item: „In the last two weeks I have been happy and in a good mood“) and is answered on a 6-point response scale ranging from 1 = *at no time* to 6 = *all the time* (cf. Table 1 for summary descriptive statistics).

Somatic complaints were measured with a shortened German version of the Occupational Stress Indicator (Cooper & Williams, 1991), translated by Höge, Sora, Weber, Peiró and Caballa (2015). Twelve items measure the frequency of somatic complaints such as sleep problems, digestive disorders, exhaustion, or loss of appetite (example item: „Please state how often you have the following complaints: sleep and sleep-through disorders“, 6-point response scale from 1 = *hardly or never* to 6 = *very often*, cf. Table 1).

Organizational citizenship behavior (OCB) was selected as a form of extraproductive work behavior and was measured with a 16-item instrument by Lee and Allen (2002). Eight items each relate to behaviors concerning the organization (OCBO, example item: „Show pride when representing the organization in public“) and to behaviors concerning individuals (OCBI, example item: „Willingly give your time to help others who have work-related problems.“). All items were answered on a 7-point response scale (1 = *never* to 7 = *always*, cf. Table 1). German items were generated following recommended standards of translation, back-translation, and comparison (McKay et al., 1996).

Workplace deviance (DEV) was chosen as a form of counterproductive work behavior and was measured with a 19-item instrument by Bennett and Robinson (2000); 12 items measured organizational deviant work behavior (organizational deviance, DEVO, example item: „Taken property from work without permission“) and 7 items measured interpersonal deviant work behavior (interpersonal deviance, DEVI, example item: „Made fun of someone at work“). Items used a 7-point response scale (1 = *never* to 7 = *daily*)

Table 1: Descriptive statistics, Pearson zero-order correlations and internal consistencies.

		<i>M</i>	<i>SD</i>	ω	1	2	3
1	SEWP Dimension 1 (reproductive-material)	2.59	1.10	.81	.84**	.50**	.57**
		2.27	1.15	.88			
2	SEWP Dimension 2 (social-communicative)	1.88	0.90	.75		.76**	.44**
		1.56	0.78	.75			
3	SEWP Dimension 3 (legal-institutional)	1.99	0.95	.65			.61**
		1.42	0.65	.65			
4	SEWP Dimension 4 (status and recognition)	1.60	0.81	.81			
		1.36	0.69	.85			
5	SEWP Dimension 5 (meaningful-subject-related)	2.05	1.09	.89			
		1.66	0.95	.88			
6	SEWP Global Scale	2.02	0.67	.84			
		1.65	0.61	.87			
7	Subjective Well-being	3.46	1.05	.87			
8	Somatic Complaints	2.39	0.85	.85			
9	OCB Organization	4.91	1.42	.91			
10	OCB Individual	5.57	1.01	.84			
11	DEV Organization	1.59	0.61	.78			
12	DEV Individual	1.52	0.68	.78			

Note: $N = 477-481$; ω = McDonald's Omega Total; OCB = Organizational Citizenship Behavior; DEV = Workplace Deviance; for SEWP scales, values for the 2 response scales for applicability and strain are reported in lines 1 and 2 of each cell; correlations between response scales of the same dimension are provided in the matrix diagonal; * $p < .05$, ** $p < .01$.

and were translated following established procedures as described for OCB.

Data analysis

To analyze the factor structure of the SEWP scale, we conducted confirmatory factor analyses (CFA) using full maximum likelihood estimation and established indicators of absolute and relative model fit. We assessed the reliability of the SEWP scale by using McDonald's Omega Total (McNeish, 2018) as an indicator of internal consistency. To establish criterion validity, we examined patterns of Pearson zero-order correlations. We performed all calculations with SPSS 24, AMOS, and R.

Results

Factorial validity

The factorial structure was examined with a series of CFA by analyzing participants' answers on both response scales separately for both studies. For each of these four independent analyses, we found an identical SEWP version of 15 items (3 items loading on 5 dimensions) to be the most suitable in terms of reliability as well as content and factorial validity. Testing both studies for measurement invariance revealed full (*applicability* response scale) or partial (*strain* response scale) tau-equivalent measurement, a necessary prerequisite for combined variance-covariance analyses

4	5	6	7	8	9	10	11	12
.26**	.50**	.68**	-.28**	.57**	-.19**	-.02	.10*	-.06
.51**	.58**	.75**	-.56**	.46**	-.15**	.02	.17**	.00
.25**	.42**	.69**	-.29**	.52**	-.25**	-.15**	.15**	.01
.52**	.50**	.74**	-.54**	.58**	-.19**	-.05	.15**	.04
.54**	.40**	.73**	-.23**	.51**	-.29**	-.10*	.16**	.06
.40**	.43**	.68**	-.25**	.40**	-.16**	-.02	.19**	.09
.76**	.53**	.60**	-.16**	.29**	-.10*	-.07	.12**	.06
	.58**	.65**	-.23**	.55**	-.09	-.08	.11*	.09
	.77**	.73**	-.54**	.57**	-.48**	-.10*	.28**	.02
		.77**	-.41**	.43**	-.32**	-.02	.30**	.04
		.79**	-.59**	.49**	-.59**	-.12**	.24**	.02
			-.46**	.57**	-.26**	-.04	.27**	.06
				-.58**	.20**	.08	-.15**	-.06
					-.14**	.01	.21**	.13**
						.45**	-.24**	.01
							-.16**	-.15**
								.57**

(Steenkamp & Baumgartner, 1998). Because of the comparable findings, we report combined results for study 1 and study 2 in this paper. The measurement models for both response scales fit the data well (*applicability*: $\chi^2(80) = 158.88$, $p < .01$; $\chi^2/df = 1.74$; CFI = .98; TLI = .97; RMSEA = .04; $CI_{RMSEA} = [.05; .05]$, $p_{RMSEA} = .95$; *strain*: $\chi^2(80) = 145.84$, $p < .01$; $\chi^2/df = 1.80$; CFI = .98; TLI = .97; RMSEA = .04; $CI_{RMSEA} = [.05; .05]$, $p_{RMSEA} = .92$). As expected, correlations among the five dimensions were moderate to strong (Figure 1). Notably, latent correlations between dimensions 2 and 3 were particularly large (*applicability*: $r = .67$, $p < .01$; *strain*: $r = .84$, $p < .01$). Furthermore, variance explained in items 9, 12, and 14 by their respective dimensions (2 and 3) was considerably low (in the 18 % - 57 %

range; Figure 1). We consequently examined whether an alternative model with items of dimensions 2 and 3 loading on one single factor would fit the data better. We found that both fit parameters and item loadings of this four-factor model worsened when compared to the five-factor model (*applicability*: $\chi^2(84) = 211.01$, $p < .01$; $\chi^2/df = 2.51$; CFI = .95; TLI = .95; RMSEA = .06; $CI_{RMSEA} = [.05; .07]$, $p_{RMSEA} = .14$; *strain*: $\chi^2(84) = 172.56$, $p < .01$; $\chi^2/df = 2.05$; CFI = .97; TLI = .96; RMSEA = .05; $CI_{RMSEA} = [.04; .06]$, $p_{RMSEA} = .69$).

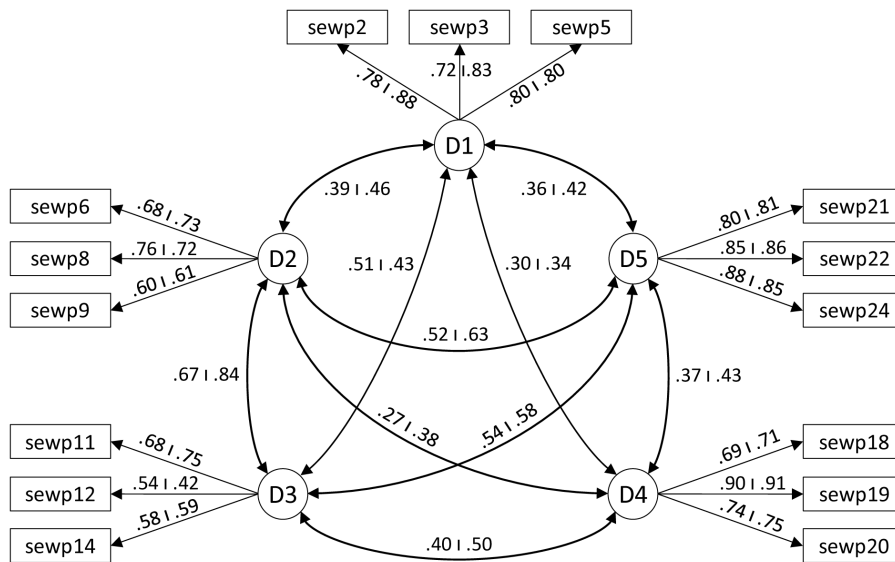


Figure: SEWP measurement model ($N = 481$; values separated by „|“ indicate standardized coefficients for the 2 SEWP response scales applicability and strain; all $p < .01$).

Descriptive statistics, reliability, and criterion validity

The SEWP mean scores (Table 1) show that participants consistently affirmed the applicability of each dimension more strongly than associated strain perceptions (all paired t-tests $p < .01$). The partially low item loadings found in the measurement models also manifested in lower internal consistencies of dimensions 2 and 3 when compared to the other dimensions, where consistencies were good. Albeit *applicability* and *strain* response scales of the same dimensions were highly correlated ($r = .61$ to $r = .84$, all $p < .01$), some differential correlation patterns were observed. *Applicability* of precarious employment (global scale) related to female compared to male gender ($r_{pb} = .15$, $p < .01$), lower levels of education ($r_s = .15$, $p < .01$), lower weekly working hours ($r = .28$, $p < .01$), lower monthly income ($r = .34$, $p < .01$) but not to age ($r = .08$, $p = .07$), or job tenure ($r = .01$, $p = .71$). Perceptions of *strain* due to precarious employment (global scale) related to female compared to male gender ($r_{pb} = .14$, $p < .01$), lower monthly income ($r = .19$, $p < .01$) but not to education levels ($r_s = .07$, $p = .15$), weekly working hours ($r = .08$, $p = .07$), age ($r = .05$, $p = .30$), or job tenure ($r = .02$, $p = .62$). Regarding criterion validity, we examined how the SEWP scale related to indicators of mental and physical health as well as extraproductive and deviant work behaviors. Table 1 shows that all SEWP dimensions consistently related to less subjective well-being and more somatic complaints, with small to medium effect sizes for the *applicability* response scale and medium to large effect sizes for the *strain* response scale. Similarly and with only one exception (status and recognition di-

mension), perceptions of precarious employment and corresponding strain were associated with less OCB and more workplace deviance, both pertaining to the organization, but hardly (OCBI) or not at all (DEVI) concerning individuals. Effect sizes were generally in the low to medium range. Compared to the five dimensions, the global scale exhibited the strongest associations with subjective well-being, somatic complaints, OCB, and workplace deviance.

Discussion

Summary of preliminary findings

In this study, we analyzed a new self-report instrument intended to measure subjective experience of work-related precariousness (SEWP). We found promising results for this measure currently under development: First, in line with the five-dimensional model of precarious employment, our analyses confirmed a stable five-factor structure of the instrument across both response scales and two independent studies. Second, internal consistencies of four dimensions suggested reliable measurement, while the legal-institutional dimension showed questionable reliabilities. Third, we found expected associations of all SEWP dimensions with personal and employment information, subjective well-being, somatic complaints, OCB, and workplace deviance. To summarize these preliminary findings, the SEWP scale in its current form already offers a reliable, valid, and economic way to quantitatively capture the multidimensional phenomenon of precarious employment. Despite these encouraging findings, however, the

SEWP scale is still under development, with a number of key points to be considered.

Further development of the SEWP

First, the third dimension exhibited some psychometric weaknesses, i.e., factor loadings of two items were comparatively low, resulting in moderate reliabilities. This mirrors difficulties in the item generation phase to find descriptors for the legal-institutional dimension that are salient to employees. For example, it is unclear to what extent employees are aware of their organizational participation rights, workplace health and safety regulations, and development opportunities. In this context, another issue that requires clarification concerns the distinctness of the social-communicative and the legal-institutional dimension. The strong latent correlations and the fact that a four-factor model still showed acceptable fit may suggest that participants perceived „equal participation“ (in social networks and concerning legal-institutional rights) as a salient commonality among both dimensions. Therefore, we aim to revise the legal-institutional dimension by tapping into a larger pool of items to strengthen both internal cohesion as well as distinctness of this dimension.

Second, while both response scales showed similar psychometric characteristics, there were subtle differences. Compared to the applicability scale, the strain scale tended to show stronger correlations with subjective well-being and somatic complaints, and weaker correlations with OCB. Further, mean values of the strain scale tended to be lower than those of the applicability scale (i.e., higher item difficulties). These findings align well with the conceptual differentiation of applicability and strain (Rohmert & Rutenfranz, 1975) and, therefore, add to the validity of our measurement approach. We currently recommend to use one or both response scales, depending on the purpose of the research (i.e., whether the applicability of aspects of precarious employment and / or the strain experienced due to these aspects are of primary interest) and the target population under study (e.g., the applicability scale may suffice as a screening for aspects of precarious employment, whereas the strain scale may be more appropriate in samples with high risk of precarious employment). Further research is needed to explore similarities and differences, as well as the (e.g., multiplicative) combination of both response scales.

The third point concerns the question under which conditions an employment situation may be labelled „precarious“. We suggest that objective features (e.g., employment relationship, amount of salary, integration in social security systems) form the core of precarious employment, whereas subjective evaluations of precariousness form an additional source of

information, allowing for a differentiated analysis of precarious employment. All SEWP dimensions were not designed to capture *descriptive* (objective) facts (e.g., monthly net income) but to ask for an *evaluation* of a possible precariousness aspect relative to the employment situation (e.g., „Due to my employment situation, nothing is usually left of my income by the end of the month“). Thus, we suggest that priority be given to objective (descriptive) facts to determine the possible degree of precarious employment, followed by a differentiated evaluation of precariousness aspects with the SEWP scale. Similarly, because the first and third dimension refer more to structural features than the second, fourth, and fifth dimension, it seems plausible to assume a hierarchical structure of dimensions within the SEWP scale. However, the correlation patterns show that it was not the first and third dimensions, but the fifth dimension and the global scale that exhibited the strongest correlation patterns across all criterion variables. We therefore currently recommend to either consider all SEWP dimensions equally or to prioritize dimensions depending on the research question. Furthermore, while the high correlation of the meaningful-subject-related dimension with subjective well-being may be explained in part by conceptual overlap, the findings highlight the greatest explanatory power results from the combined impact of all dimensions. To summarize, subjective experiences of precarious employment as measured by the SEWP scale must be interpreted in relation to objective features of the employment situation. On the one hand, this approach prevents subjective experiences (e.g., of impaired meaning in work) to be interpreted in terms of precarious employment when, in fact, objective features do not indicate precarious employment. On the other hand, the SEWP scale may help to reveal precariousness risks in situations when objective features do not clearly (but to some extent) indicate precarious employment. For example, different types of atypical employment may be characterized more clearly by establishing distinct precariousness profiles with the SEWP scale.

Limitations

One limitation concerns the composition of samples. In both samples, participants scored rather low on all SEWP scales, possibly explicable by high education levels. On the other hand, the first sample was dominated by atypically employed participants who, on average, reported higher SEWP than the second sample. Nevertheless, generalizability to samples with lower education (and presumably higher precarization risks) may be limited. Second, we solely relied on self-report data, which may be susceptible to various biases (e.g., social desirability, common method bias). While we

found meaningful correlations between SEWP scales and self-reported personal and employment information, confirming these associations with objective data could validate our findings. Third, our cross-sectional data do not permit causal inferences or analyses of prognostic validity. Fourth, the SEWP scale remains to be integrated into a nomological network to test its incremental and discriminant validity with regard to other constructs, as exemplified by Hopfgartner (2019).

Conclusion

This study presents a comprehensive, multidimensional concept of precarious employment and reports preliminary results of a self-report instrument for its measurement. As an analogy to our multidimensional approach, we refer to the broader concept of decent work (ILO, 2014) and specifically to research on minimum wages, where some authors have argued that pure economic subsistence is a too narrow concept to allow for cultural participation (e.g., Carr et al., 2016). Instead, they suggest the more comprehensive concept of the living wage that extends to meaningful participation at the workplace and in society (Shelburne, 1999), a notion that is also central to the multidimensional concept of precarious employment (Brinkman et al., 2006) utilized here. Nonetheless, in practice, the living wage is often derived by economic indicators (Carr et al., 2016). In contrast, a broader humanitarian perspective could be adopted by considering the five dimensions of precarious employment as factors that need to be addressed (and eliminated) to ensure decent work. By proposing precarious employment as an inverted but complementary perspective to some fundamental aspects of the decent work concept, we hope to inform and stimulate research on living wages that provides a foundation for decent working and living conditions.

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