1 Introduction

The significance of personal values in organizational contexts is widely acknowledged, attracting attention from both researchers and practitioners. Practical applications of understanding values include their use in personnel selection. For example, identifying individuals whose values align with organizational culture, potentially impacting factors such as job performance and likelihood of turnover (Anglim et al., 2022). Research indicates that congruence between values and behavior is linked to well-being (Bojanowska et al., 2022). Additionally, values have been correlated with various outcome variables, including attitudes towards diversity, organizational commitment, and organizational citizenship behaviors (Anglim et al., 2019; Arieli et al., 2020; Fischer & Smith, 2006; Glazer et al., 2004).

While questionnaires capturing general value structures are commonly used in research and practice, they may lack specificity to the work context, potentially disfavoring applicants' responses in selection settings (Schwartz, 2012; Consiglio et al., 2017; Uggerslev et al., 2012). Contextualized item formulations are preferred due to their higher predictive and content validity (Moldzio et al., 2021; Potočnik et al., 2021; Sackett et al., 2022; Shaffer & Postlethwaite, 2012). Therefore, this study aims to develop and validate a contextualized questionnaire using algorithm-based item selection (ABIS) to measure personal values relevant to work contexts.

2 Theoretical Background

The role of values in influencing human behavior and decision-making, is widely researched drawing on Schwartz's theory of basic human values (Schwartz, 1992; Sagiv & Schwartz, 2022). The theory discusses how values serve as guiding principles that evaluate behavioral outcomes. They are organized in a coherent circular structure based on compatibility or conflict potential of underlying goals and motives (Schwartz, 2021). The theory has broad applicability, extending to various fields such as political attitudes and organizational contexts (Davidov et al., 2008; Arieli et al., 2020).

The application of values to the work context is explored, with work values reflecting the specific expression of basic values in work settings (Ros et al., 1999). These work values encompass Social, Prestige, Intrinsic, and Extrinsic dimensions (Borg et al., 2019; Johnson 2001; Krumm et al., 2013; Sulistiobudi et al., 2022). Social-related work values reflect the meaningfulness of positive social relationships and the possibility to contribute to society. Prestige-related work values represent goals regarding power, authority, influence, and success at work. Importance of autonomy, interest, enjoyment, and creativity are expressions of Intrinsic-related work values. On the contrary, Extrinsic-related work values pertain to the significance of job security and upholding order in an employee's life.

The scarcity of sound theoretical foundations in work value research (Lyons et al., 2009), particularly in the German work context, emphasize the importance of aligning work values with Schwartz's theory of basic human values (Borg et al., 2019; De Clerq et al., 2008). Existing measures such as the Super Work Value Measure and the Munster Work Value Measure are either outdated or do not fully capture the breadth of basic values and lack theoretical soundness (Seifert & Bergmann, 1983; Krumm et al., 2013). Other instruments, like those developed by Stiglbauer et al. (2022), focus on aspects of employer branding rather than on the values inherent in employees to work itself, lacking consideration for Schwartz's circular arrangement of values. Furthermore, potential variations in values across cultures

underline the necessity of assessing the applicability of Schwartz's theory within the German workplace context (Shi et al., 2023).

Outside the German context, existing questionnaires often fail to fully represent Schwartz's theory of basic human values, which is crucial due to the significant differentiations within these values (Arciniega & González, 2000; Avallone et al., 2010; Busque-Carrier et al., 2022). However, Consiglio et al. (2017) support the application of Schwartz' values in the work context. Albrecht et al. (2020) extend this work with rating scales, enabling comparisons of longer lists of values without requiring participants to discriminate between individual values. Consequently, the conducted study followed the intention to develop and validate a German work value questionnaire based on Albrecht et al.'s (2020) Values at Work Scale.

3 Method

The pregistered study used a sample of $N = 1049$ participants (46.66% women, $M_{tenure(years)}=12.43$, $SD_{tenure(years)}=10.78$, $M_{age}=44.14$, $SD_{age}=12.43$, $M_{workinghours/week}=37.64$, $SD_{workinghours/week}=6.75$) based on power considerations for scale validation procedures. The data was acquired using an online-panel sample in Germany (Aguinis et al., 2021; Porter et al., 2019; Ward & Meade, 2023)

The process of translating the Values at Work Scale into German and adapting it to ensure cultural and linguistic accuracy, followed guidelines from the International Test Commission (ITC, 2017). Back-translation by native English speakers with relevant cultural backgrounds was conducted to ensure fidelity to the questionnaire's meaning. Additional items were incorporated to facilitate ABIS and to comprehensively address all theoretical facets. Construct definitions and existing German-language questionnaires guided item formulation, with selection based on content validity. To ensure content validity, expert interviews with researchers and cognitive interviews with individuals from the target population were conducted, leading to iterative adjustments in wording and cultural appropriateness (Boateng et al., 2018; MacKenzie et al., 2011).

Prior to analyzing the newly developed questionnaire according to its quality, careless or inattentive responses were analyzed and excluded (Schroeders et al., 2022; Ward & Meade, 2023). The final form of the questionnaire was constructed using a genetic algorithm based on evolutionary selection processes (Schroeders et al., 2016). These approaches tend to outperform classical approaches of scale construction (Olaru & Danner, 2021; Sandy et al. 2014; Schroeders et al., 2016). Using cross-validation procedures between training and test data, a final 33 item version (3 items per work value) of the Circular Work Value Scale (CWVS) was developed. Based on this version, convergent, discriminant and incremental congruent validity of the scale was assessed. Structural Equation Modeling, Multidimensional Scaling (MDS) and general linear models were used.

4 Results

The final set of selected items shows good fit to the training data. Cross-validation to the test data supports the assumption of strict measurement invariance between the two samples. Additionally, analysis of measurement invariance between age and gender groups are in line with the conjecture of strict measurement invariance. Each quadrant of the MDS-solution includes one work value dimension supporting the circularity and the relationships of opposing value dimensions.

Confirmatory and exploratory analysis mostly support the proposed circular structure and construct validity of the work values. The work values explain more variance than context-free basic values in the perceived value congruence of the Person-Organization Fit. Hence, the analysis supports the incremental congruent validity of the developed work value measure.

5 Discussion

The study delivers first evidence for the CWVS to be more adequate when predicting work related outcomes. As the questionnaire's validity and the theoretical assumptions are predominantly supported, we encourage the application of this questionnaire in practical and research settings. The economic questionnaire with contextualized items can be used for a thoroughly assessment of employees or applicants value structure. The knowledge about what people value at work can provide powerful insights (Anglim et al., 2022; Arieli et al., 2020) and be beneficial for employers and employees (Bojanowska et al., 2022). The questionnaire can be implemented for general assessment of what employees in an organization do expect from their work or deliver additional material for interventions. For instance, expectations in a team can be clarified based on the CWVS by enabling a general, work-related framing. Furthermore, work design measures to improve value congruence between tasks and personal values can be adapted more purposefully due to higher content validity of work values, compared to basic values.

The development of the CWVS presents a valuable contribution, yet certain limitations should be acknowledged. Despite the broad coverage of dimensions in the CWVS, the item selection algorithms may yield various optimal solutions, leading to instability in some work values such as Enjoyment, Social Justice, Helping and Supporting, and Safety. This suggests a need for more narrowly defined work values, aligning with Schwartz's theory of 19 values. Additionally, fluctuations in values over time necessitate ongoing evaluation of the questionnaire's utility in work contexts. Lower internal consistencies observed in Enjoyment and Traditional Values call for further investigation into the measurement of these constructs. While correlations demonstrate convergent validity, caution is warranted due to low factorial validity in the IEA-Short Form scales used. Future research should explore specific facets of work values and consider bifactor models for more accurate estimation. Addressing common method biases through multi-source and longitudinal data collection, alongside cross-cultural validations, is crucial. Assessing incremental validity over time and against diverse criteria like job performance and organizational citizenship behavior is recommended. Moreover, developing additional questionnaires to assess work value-based behavior and organizational culture perceptions can offer insights for personnel and organizational development, aiding in mitigating value conflicts within teams and fostering alignment with organizational values.

Overall, our data promotes the application of the theory of basic human values to the German work context. We used a genetic algorithm to derive a valid questionnaire which supports strict measurement invariance between gender and age groups. Analysis of convergent, discriminant, and incremental congruent validity as well as MDS back our hypothesized relations to a great extent. The study results in a promising questionnaire for broader work value assessments with practical relevance.

6 References

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