Full-Length Research Report

Development and Psychometric Evaluation of Brief Scales for Assessing Two Dimensions of Psychosocial Resource Utilization in Family Caregivers

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Abstrac: Psychosocial resources can enhance positive experiences and reduce negative experiences in family caregivers. This study aimed to develop scales for measuring the utilization of resources related to well-being and coping with daily hassles adapted for family caregivers. It aimed to examine their psychometric properties with a German sample of 445 informal caregivers. Factorial analyses, reliability, and validity tests yielded the scales "Utilization of resources related to well-being" and "Self-encouragement and acceptance." These showed divergent validity to scales focusing on care-recipients' cognitive and functional impairment and sufficient convergent validity to scales measuring physical health complaints, caregiver burden, and depression. The scales represent economic measures suitable for both preventive and interventional studies.

Keywords: family caregivers, psychosocial resources, questionnaires, test construction, test revision

Introduction

Providing care to older people is often associated with various burdens (Adelman et al., 2014). A systematic review by Bom et al. (2019) concluded that caregivers show more depressive feelings and lower mental health than noncaregivers, especially when they provide extensive care. However, not all caregivers experience caregiving as equally burdensome. This variation is not accounted for by objective stressors but rather by the subjective appraisal of caring, which, in turn, depends on the evaluation of resources available for coping (Nolan et al., 1996). For example, studies on caregivers show that mastery is linked to fewer depressive symptoms, anxiety, caregiver burden, and psychological distress (Adams et al., 2005; Clair et al., 1995; Pioli, 2010; Soskolne et al., 2007), that sense of control is negatively related to caregiver depression (Miller et al., 1995), that self-efficacy, optimism, and self-esteem show positive correlations with the caregivers' capability to "live well" (Lamont et al., 2019), and that sense of coherence, generalized self-efficacy, and perceived social support are negatively associated with caregiver burden (Soltys et al., 2021; Turró-Garriga et al., 2020). Since one can realize the positive potential of resources only by activating and, consequently, utilizing available resources in prevention and intervention research about family caregivers, it is essential to measure psychosocial resource utilization with psychometrically sound instruments. Regarding intervention research, increases in the utilization of psychosocial resources mediated the effects of a cognitive-behavioral therapy intervention on the quality of life of family caregivers of people with dementia (Töpfer & Wilz, 2021). This intervention incorporates resource activation as a superordinate intervention heuristic. Thus, one can see the utilization of resources as a proximal indicator of resource activation. To our knowledge, the Psychosocial Resource Utilization Questionnaire for Family Caregivers of People with Dementia (PRUQ-CD;

Töpfer & Wilz, 2018) is the only validated questionnaire measuring the psychosocial resource utilization of caregivers so far and is restricted to caregivers of people with dementia. The research objective of the present investigation is the psychometric evaluation of two scales adapted from the PRUQ-CD for the economic assessment of the utilization of resources related to well-being and coping with daily hassles in informal caregivers in general (i.e., not limited to caregivers of people with dementia).

Theoretical Background

Resources have already been conceptualized in various ways (Hobfoll, 2002). Resources receive their quality as "resources" through the subjective evaluation of external, interpersonal, or intrapersonal characteristics as positive and helpful for attaining personal goals. According to Grawe's (2004) consistency theory, people develop motivational goals to fulfill their basic psychological needs and resources as the means for achieving their motivational goals. Grawe (1997) proposed *resource activation* as one of four general mechanisms of change in psychotherapy that help people recognize and use their psychosocial resources in different domains of functioning. Resource activation is successful if it increases *resource utilization,* i.e., the degree to which resources are actually utilized. Trösken (2002) posited that the current utilization of resources is an indicator of the current experience of *congruence*. Congruence denotes the alignment between activated motivational goals and perceptions of reality, a pivotal variable in Grawe's consistency theory. Against this background, she grouped psychological resources in nine theoretically derived *resource areas* according to the motivational goal people strive to achieve by utilizing them. Trösken's questionnaire on utilizing psychological resources showed prognostic validity for both inpatients from a psychosocial rehabilitation clinic and those with alcohol dependence 1 year after therapy, and changes in utilizing psychological resources were correlated with all assessed outcome measures in inpatient and daycare psychosomatic treatment (Deppe-Schmitz et al., 2009; Deubner-Böhme et al., 2011; Groß et al., 2014).

Caregivers of older people are a vulnerable group to depressive symptoms and exhaustion (Adelman et al., 2014; Bom et al., 2019), and the degree to which they are able to utilize their psychosocial resources seems of particular interest. Achieving well-being and coping with daily hassles are two critical goals for caregivers when utilizing psychosocial resources (Töpfer & Wilz, 2018). While maintaining social and leisure activities outside the caregiving role is an important resilience factor, most caregivers reduce those activities because of their caregiving responsibilities (Schüz et al., 2015; Teahan et al., 2018). Perceived changes in leisure-time activities have been shown to mediate the effect of caregiving intensity and burden on mental health in informal caregivers of people with dementia (Schüz et al., 2015). Accordingly, increasing leisure-time activities through an intervention reduced depressive symptomatology in caregivers (Losada et al., 2011). In the following, we call the degree to which caregivers utilize psychosocial resources for achieving well-being *utilization of resources related to well-being*.

Another resilience factor for informal caregivers lies in specific coping strategies, often shown to impact caregiver burden, depression, and general health (Teahan et al., 2018). Given that family caregivers are frequently confronted with various burdensome challenges in their everyday lives (Etters et al., 2007; Kneebone & Martin, 2003; Tang et al., 2015), the utilization of psychosocial resources for coping with these stressors is of utmost importance. Emotion-focused coping strategies for managing one's emotional response to stress (e.g., acceptance, emotional support, humor, positive reframing, religion) and problem-focused coping strategies for dealing with specific problems (e.g., active coping, instrumental support, planning) proved to reduce anxiety, depression, stress, burden, and behavioral and psychological symptoms in caregivers of people with Alzheimer's disease (Monteiro et al., 2018). Although researchers conceptualize caregiving appraisal inconsistently, factors associated with caregiver appraisal include coping, perceived physical and psychological health, self-efficacy about caregiving, and positive aspects of caregiving at the individual level as well as family functioning, quality of the caregiver/care-recipient dyadic relationship, and support from the family at the interpersonal level (Wang et al., 2020). In the following, we call the degree to which caregivers utilize psychosocial resources for coping with daily hassles *utilization of resources related to coping with daily hassles*.

While questionnaires exist on hassles and uplifts in caregiving and positive aspects of caregiving, these mainly capture the appraisal of caregiving (Hall, 2014; Lee & Li, 2022). However, the finding that role captivity is associated with caregiver burden underlines the importance of positive activities aside from the caregiving situation (Lindt et al., 2020). Therefore, it is of added value to assess the active utilization of psychosocial resources beyond the caregiving context, including resources potentially relevant both inside and outside of the caregiver role. Since no questionnaire had been available for measuring the utilization of psychosocial resources in dementia caregivers, Töpfer and Wilz (2018) adapted the Psychosocial Resource

Utilization Questionnaire (Trösken 2002; Trösken & Grawe, 2003), which is based on Grawe's (2004) consistency theory. The three subscales of the Psychosocial Resource Utilization Questionnaire for family caregivers of people with dementia (PRUQ-CD) each referred to a motivational goal ("Utilization of resources related to well-being", "Utilization of resources related to coping with daily hassles", and "Utilization of resources related to social support"), demonstrated acceptable to good internal consistency, and were significantly related to other instruments chosen to determine convergent validity but still sufficiently distinct (Töpfer & Wilz, 2018). Both higher utilization of resources related to well-being and coping with daily hassles were associated with higher quality of life and emotional well-being, fewer depressive symptoms, and lower burden of care (Töpfer & Wilz, 2018). Furthermore, it has been shown that the effects of an intervention incorporating resource activation as a superordinate intervention heuristic on quality of life are mediated by utilizing resources related to well-being and coping with daily hassles (Töpfer & Wilz, 2021). However, the factorial structure of the PRUQ-CD has yet to be examined. Furthermore, the PRUQ-CD assesses psychosocial resource utilization only in the family caregivers of dementia patients. There are presently no instruments measuring psychosocial resource utilization in the above-mentioned important areas (well-being and coping with daily hassles) for caregivers of older people with other impairments.

Study Aims

The current data analyses pursued two main objectives. First, we aimed to clarify the dimensionality of two sets of questions developed to economically measure the utilization of psychosocial resources related to well-being and coping with daily hassles, respectively, among family caregivers. Second, we sought to examine the psychometric properties of the identified scales, including their reliability and validity. Specifically, we investigated their convergent validity with related constructs measuring caregiver burden, depression, subjective health complaints, negative problem orientation, self-efficacy, and positive perception of caregiving. Those constructs are similar, albeit not identical, with resource utilization as they do not capture the caregivers' active engagement in using psychosocial resources and serve more as indicators of the positive or negative consequences stemming from the utilization or nonutilization of psychosocial resources. Regarding divergent validity, we compared the two resource utilization scales to measures assessing the impairment of the care-recipient, which we expected to be unrelated to the psychosocial resource utilization of the caregiver. The comparison with scales focusing on the care-recipient and their situation, specifically their need for help, is intended to demonstrate that our scales measure constructs distinct from the care-recipient's condition.

Methods

Procedure

In the present study, data of a pragmatic RCT (Relieving distressed caregivers: ReDiCare) were used, in which a stepped approach of a low threshold short intervention (PLiP intervention) and an optional telephone-based cognitive behavioral therapy (Tele.TAnDem) was evaluated (for details, see Pfeiffer et al., 2021).

Participants

The participants in the ReDiCare study were primary caregivers (providing care for $\geq$ 1.5 h per day on average of $\geq$10.5 h per week in total, including travel time) for a person of $\geq$ 60 years with a care degree ("Pflegegrad") from 1 to 5 (i.e., the degree of self-reliance restrictions according to the German Long-Term Care Act). The care-recipients had to be a member of one of the two participating long-term care insurances (i.e., AOK Baden-Württemberg or AOK Bavaria). A detailed summary of all inclusion and exclusion criteria as well as further information on the enrollment procedure are reported in the study protocol (Pfeiffer et al., 2021).

At baseline, we included data from $N = 445$ informal caregivers (89.2% female, M_{age} = 60.16 years, SD_{age} = 10.29 years, range: 32–87 years) in the ReDiCare study.[1] Of the care-recipients, 56.4% were female and had a mean age of 80.93 years (SD = 9.16 years, range: 60–99 years). Table 1 displays detailed sample characteristics of the caregivers and their care-recipients.

All participants gave written informed consent. The Ethics Committee of the Faculty of Social and Behavioural Sciences of the Friedrich Schiller University Jena, Germany (committee's reference number: FSV 18/08) approved the trial.

[1] The sample size of this study is slightly larger than the final sample of the ReDiCare project because four of the participants began psychotherapy and three of the care recipients entered a nursing home shortly before the start of the study and were therefore excluded posthoc from the data analysis of the intervention study.

Table 1. Sample characteristics (N = 445)

Caregivers	
Age in years, *M* (*SD*)	60.16 (10.29)
Gender (female), *n* (%)	397 (89.2)
Relationship to care-recipient, *n* (%)	
Spouse	155 (34.8)
Adult child (in law)	271 (60.8)
Other	19 (4.4)
Education, *n* (%)	
No education	10 (2.3)
Primary or other	193 (43.6)
Secondary: lower level	148 (33.4)
Secondary: upper level	82 (18.5)
Other	10 (2.3)
Living with care-recipient, *n* (%)	254 (57.7)
Care duration in years, *M* (*SD*)	5.06 (5.03)
Care-recipients	
Age in years, *M* (*SD*)	80.93 (9.16)
Gender (female), *n* (%)	251 (56.4)
Barthel Index (BI), *M* (*SD*)	51.73 (27.63)
Care insurance	
AOK Bavaria	198 (44.5)
AOK Baden-Württemberg	247 (55.5)
Dementia, *n* (%)	246 (55.9)
Stroke, *n* (%)	97 (22.0)
Care degrees	
Care degree 1	11 (2.5)
Care degree 2	128 (29.2)
Care degree 3	163 (37.2)
Care degree 4	101 (23.1)
Care degree 5	35 (8.0)

Psychosocial Resource Utilization Scales

ReDiCare used two adapted scales of the PRUQ-CD to measure utilization of resources related to well-being (9 items, Cronbach's α = .78, e.g., "I did something for my health and physical fitness") and utilization of resources related to coping with daily hassles (15 items, Cronbach's α = .72, e.g., "I refreshed my motivation by reminding myself of my goals") in family caregivers. Participants used a 5-point scale (1 = *never*, 5 = *very often*) to indicate the frequency with which they had utilized each resource during the last 4 weeks. The development of the PRUQ-CD is described in detail elsewhere (Töpfer & Wilz, 2018). An expert group consisting of the authors of the PRUQ-CD revised the questionnaire for use in ReDiCare. From the 9 items measuring utilization of resources related to well-being, 8 were retained, 1 item was cut, and an additional item from the original questionnaire by Trösken (2002) was added. From the 20 items measuring utilization of resources related to coping with daily hassles in the PRUQ-CD, 10 were retained, 10 were cut, and 5 additional items from the original questionnaire by Trösken (2002) were added. We based these decisions on previous factor analyses in a non-clinical sample, a sample with few clinical symptoms, and a clinical sample. More specifically, we retained or added items if they had previously been shown to pertain to a subfactor of the utilization of resources related to well-being or utilization of resources related to coping with daily hassles. We cut items if they had not been retained in any previous factor analysis. Table 2 shows a comparison of the items from Töpfer and Wilz (2018) with the items of the current study professionally translated into English by a native English speaker with extensive experience in psychological research as well as their original German wording.

Assessment

We used the following measures, all of which were provided in their German versions for the psychometric evaluation of the psychosocial resource utilization scales:

(1) The Giessen Subjective Complaints List (GBB-24, Brähler et al., 2008; Cronbach's α = .92) uses 24 items to assess caregivers' subjectively experienced overall distress caused by physical health complaints (e.g., "headache") in the past week. Higher scores indicate more physical health complaints.

(2) The Centre for Epidemiological Studies Depression scale (CES-D, Hautzinger et al., 2012; Radloff, 1977; Cronbach's α = .90) with 20 items (e.g., "I felt depressed") and higher scores indicating higher depression (max. score = 60).

(3) The Sense of Competence Questionnaire (SCQ-AV; Pendergrass et al., 2015), specifically the two subscales: "Satisfaction with one's own performance as a caregiver" (5 items, e.g., "I feel that, in the past, I haven't done as much for my relative as I could have or should have," Cronbach's α = .72) and "Consequences of involvement in care for the caregiver's life" (7 items, e.g. "I feel that my health has suffered because of my involvement with my relative," Cronbach's α = .82). The items of the SCQ-AV are rated on a 5-point scale (from *agree* to *disagree*). For the analyses, we coded the variables such that higher values indicate higher caregiving self-efficacy and higher caregiver burden, respectively.

(4) The short version of the Social Problem Solving Inventory – Revised (SPSI-R:S, D'Zurilla et al., 2002, Graf, 2003), specifically the subscale "Negative Problem Orientation" (NPO; e.g., "I usually feel threatened and afraid when I have an important problem to solve," Cronbach's α = .84) that assesses negative problem orientation using 5 items with a 5-point scale (0 = *not very true of me*, 4 = *extremely true of me*).

Table 2. Overview of the items of PRUQ-CD and items from the current study

PRUQ-CD (Töpfer & Wilz, 2018)	Current study	German instructions and items
Utilization of resources related to well-being	Well-being: Over the last 4 weeks, how often did you do or experience the following?	Wohlbefinden: Bitte schätzen Sie ein, wie häufig Sie während der letzten 4 Wochen folgende Verhaltensweisen durchgeführt bzw. folgende Erlebensweisen oder Situationen erlebt haben.
During the last 4 weeks, I felt good because . . .	During the last 4 weeks, . . .	Während der letzten 4 Wochen. . .
. . . I made a conscious effort to relax and unwind.	**1. . . . I made a conscious effort to relax and unwind.**	1. . . . habe ich mich bewusst entspannt.[g]
. . . I was proud of something I accomplished.	2. . . . I was proud of something I accomplished.[c]	2. . . . habe ich etwas geleistet, auf das ich stolz sein kann.[h]
. . . I spent time with friends and acquaintances.	3. . . . I spent time with friends and acquaintances.[f]	3. . . . bin ich mit Freunden oder Bekannten zusammen gewesen.
. . . I had stimulating and interesting experiences.	4. . . . I had stimulating and interesting experiences.[e]	4. . . . habe ich anregende und interessante Erlebnisse gehabt.
. . . I did something for my health and physical fitness.	**5. . . . I did something for my health and physical fitness.**	5. . . . habe ich etwas für meine Gesundheit und Fitness getan.[i]
. . . I took the time to self-reflect.	**6. . . . I took the time to self-reflect.**	6. . . . habe ich mir Zeit genommen, mich auf mich selbst zu besinnen.
. . . I took care of something that I had been putting off.	7. . . . I took care of something that I had been putting off.[c]	7. . . . habe ich etwas erledigt, was schon seit einiger Zeit angestanden hat.[j]
–	**8. . . . I spent time on my hobbies.[a]**	8. . . . bin ich meinen Hobbies nachgegangen.
. . . I did something really nice.	9. . . . I did something really nice.[e]	9. . . . habe ich etwas besonders Schönes unternommen.
. . . I spent time with my partner or family.	–[b]	
Utilization of resources related to coping with daily hassles	Managing daily stress: The next questions concern how you deal with stressful situations in your daily life (e.g., caretaking, work, household). During the last 4 weeks, how often did you use the following strategies to cope with daily stress?	Bewältigung von alltäglichem Stress: Die folgenden Fragen beziehen sich auf verschiedene Möglichkeiten, im Alltag (z. B. während der Pflege, Arbeit, im Haushalt) mit stressigen Situationen fertig zu werden. Bitte schätzen Sie ein, wie häufig Sie während der letzten 4 Wochen folgende Strategien zur Bewältigung von alltäglichem Stress umgesetzt haben.
Whenever I felt stressed over the last 4 weeks, it helped me . . .	During the last 4 weeks, . . .	Während der letzten 4 Wochen. . .
. . . to take a step back and figure things out.	1. . . .I took a step back to figure things out.[c]	1. . . . habe ich mir einen Überblick über die Situation verschafft.
. . . to refresh my motivation by reminding myself of my goals.	**2. . . . I refreshed my motivation by reminding myself of my goals.**	2. . . . habe ich mich motiviert, indem ich mir meine Ziele oder Fortschritte vor Augen geführt habe.[k]
. . . to let off steam.	3. . . . I let off steam.[c]	3. . . . habe ich Dampf abgelassen.
. . . to distance myself from the situation.	4. . . . I distanced myself from the situation.[d]	4. . . . habe ich mich abgegrenzt.
. . . to treat myself to something nice.	**5. . . . I treated myself to something nice.**	5. . . . habe ich mir etwas gegönnt.
. . . to know that I can handle things.	**6. . . . I told myself that I can handle things.**	6. . . . habe ich mir gesagt, dass ich die Situation meistern kann.
. . . to withdraw from the situation.	7. . . . I withdrew from the situation.[d]	7. . . . habe ich mich zurückgezogen.
. . . to accept things as they are.	8. . . . I accepted things as they are.[e]	8. . . . habe ich die Situation akzeptiert.
. . . to face things with a sense of humor.	9. . . . I faced things with a sense of humor.[f]	9. . . . bin ich einer Situation mit Humor begegnet.

(Continued on next page)

Table 2. (Continued)

PRUQ-CD (Töpfer & Wilz, 2018)	Current study	German instructions and items
… to be patient.	10. … I was patient.[f]	10. … hatte ich Geduld.
–	**11.** … **I relaxed.**[a]	11. … habe ich mich entspannt.
–	**12.** … **I spent time pursuing my hobbies and interests.**[a]	12. … bin ich meinem Hobby oder meinen Interessen nachgegangen.
–	13. … I contributed my own ideas.[a,c]	13. … habe ich meine Vorstellungen eingebracht.
–	**14.** … **I looked at my difficulties as opportunities.**[a]	14. … habe ich meine Schwierigkeiten als Chance gesehen.
–	**15.** … **I thought: "I am still better off than other people."**[a]	15. … habe ich gedacht, dass es mir im Vergleich zu anderen Menschen immer noch gut geht.
… to feel accepted.	–[b]	
… to find someone to talk to.	–[b]	
… to take my mind off things by doing something else.	–[b]	
… to deliberately think about other things every now and then.	–[b]	
… to cry.	–[b]	
… to take advantage of professional help.	–[b]	
… to re-evaluate my attitude.	–[b]	
… to find out how other people dealt with similar situations.	–[b]	
… to draw strength from my faith or spirituality.	–[b]	
… to structure my day.	–[b]	

Note. PRUQ-CD = Psychosocial Resource Utilization Questionnaire for Family Caregivers of People with Dementia. Items from the current study printed in bold were included in the final factorial model. [a]Items new in the current study not included in PRUQ-CD. [b]Items from PRUQ-CD not included in the current study. [c]Item excluded in the EFA. [d]Items excluded in the CFA because of a Heywood case. [e]Items excluded in CFA based on the examination of residual correlations and modification indices. [f]Items excluded for reasons of content. [g]A more literal translation of this item would be … "I consciously relaxed …". [h]A more literal translation of this item would be … "I achieved something I can be proud of …". [i]A more literal translation of this item would be … "I did something for my health and fitness …". [j]A more literal translation of this item would be … "I completed something that had been pending for some time …". [k]A more literal translation of this item would be … "I motivated myself by keeping my goals or progress in mind …".

(5) An adapted version of the Positive Aspects of Caregiving scale (PAC, Tarlow et al., 2004, Cronbach's α = .85), which consists of 6 items (e.g., "Made me feel more useful") with a 5-point scale from 1 (*disagree a lot*) to 5 (*agree a lot*).
(6) The Barthel Index (BI, Mahoney & Barthel, 1965), which measures activities of daily living (ADL, Cronbach's α = .87), and the Extended Barthel Index (EBI, Prosiegel et al., 1996, Cronbach's α = .72), which measures cognitive functioning (comprehension, verbal expression, social interaction, problem-solving, memory/learning/orientation, and vision/neglect). Higher scores indicate higher functioning/less cognitive impairment.

Data Analysis

We examined the factorial structure of the items pertaining to the utilization of resources related to well-being separately from that of the items pertaining to the utilization of resources related to coping with daily hassles, since they referred to different motivational goals and had diverging instructions. For the factor analyses, we first split the sample randomly into two halves (dataset 1: n = 222; dataset 2: n = 223) using IBM SPSS Statistics 27. We used MPlus version 8.6 for exploratory factor analyses (EFA) with dataset 1 and confirmatory factor analyses (CFA) with dataset 2. We determined the number of factors retained for the EFA using parallel analyses. We used an oblique type of rotation (Geomin) to increase the interpretability of the factors assumed to intercorrelate. We assigned items with factor loadings of .40 or higher to this factor and subsequently tested the resulting factor solutions in CFA. As model fit indices, we employed the χ^2-statistic, root mean square error of approximation (RMSEA), comparative fit index (CFI), the Tucker Lewis index (TLI), and standardized root mean square residual (SRMR). We regarded models with RMSEA < .08, CFI > .90, TLI > .90, and SRMR < .10 as acceptably fitting the data (Marsh et al., 2004). If we found fitting models, we tested reliability and validity in the whole sample using IBM SPSS Statistics 27. We computed Cronbach's alphas for the psychosocial resource utilization scales as well as correlation coefficients between T0 (baseline) and T1 (3 months after T0) sum scores within the control group of the ReDiCare study (N = 182) to analyze internal consistency and retest reliability, respectively. We examined convergent and divergent validity by computing correlation coefficients of the sum scores of the psychosocial resource utilization scales with the GBB-24, CES-D, the SCQ-AV subscales, the NPO subscale of the SPSI-R:S, PAC, BI, and EBI at T0. We regarded convergent validity of the psychosocial resource utilization scales as sufficient if the correlations with SCQ-AV self-efficacy and PAC were rather positive ($r \geq .20$) and with GBB-24, CES-D, SCQ-AV caregiver burden, and NPO rather negative ($r \leq -.20$). We used this cutoff since these measures depict not the same but rather related constructs that can be interpreted as positive consequences of psychosocial resource utilization but lack an element of action initiated by the caregiver. We regarded divergent validity as sufficient if the correlations with BI and EBI were very low ($r < .20$) or not significant.

Results

Our analysis of skewness and kurtosis showed that none of the items deviated much from a normal distribution. Skewness ranged from −.47 to .93. Kurtosis ranged between −.81 and .63.

Utilization of Resources Related to Well-Being

The parallel analysis resulted in only one factor with an eigenvalue greater than the cutoff suggested by the parallel analysis for that factor. Therefore, we retained one factor in the EFA. Since item 2 and item 7 had factor loadings below .40, they were excluded, and we tested a one-factor structure in CFA, including items 1, 3, 4, 5, 6, 8, and 9. Testing this factor structure in CFA showed a poor model fit, $\chi^2(14)$ = 81.88, p < .001, RMSEA = .147, CFI = .865, TLI = .797, SRMR = .061. Therefore, we examined residual correlations and modification indices, resulting in excluding items 4 and 9. Furthermore, we excluded item 3 because, unlike all other items, it did not represent a clearly caregiver-initiated act of utilization and had a lower factor loading. This final one-factor model for the utilization of resources related to well-being (URRWB) had a good model fit, $\chi^2(2)$ = 2.76, p = .25, RMSEA = .041, CFI = .997, TLI = .990, SRMR = .016. The factor includes items on relaxation and self-reflection (items 1 and 6) and pleasurable activities (items 5 and 8). Figure 1 displays the final factorial model.

Utilization of Resources Related to Coping With Daily Hassles

The parallel analysis resulted in three factors with an eigenvalue greater than the related cutoff value suggested by the parallel analysis. Therefore, we extracted three factors in the EFA. Factor one included items 2, 6, 8, 9, 10, 14, and 15, factor two items 4 and 7, and factor three items 5, 11, and 12. Three items (items 1, 3, and 13) had to be excluded because of low factor loadings (below .40). Testing this factor structure in CFA showed signs of a "Heywood

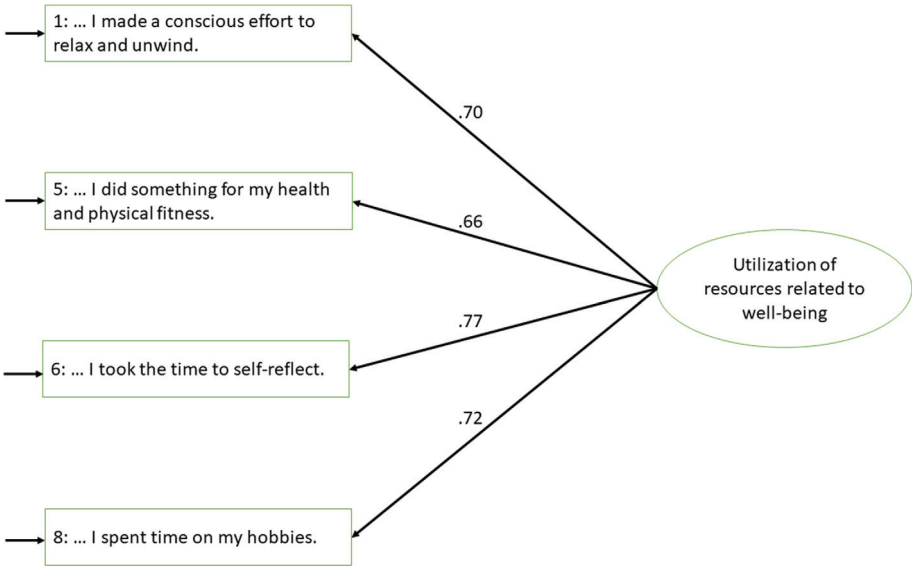

Figure 1. Final factor model for "Utilization of resources related to well-being." Factor loadings are standardized.

case" for item 7, i.e., a factor loading above 1.0 and a negative residual variance. Therefore, item 7 had to be excluded, as was item 4 as the only item remaining for the related factor. The resulting two-factor structure had a poor model fit, $\chi^2[34] = 102.517$, $p < .001$, RMSEA = .095, CFI = .839, TLI = .787, SRMR = .076. Inspection of residual correlations and modification indices led to the exclusion of item 8. Furthermore, we excluded items 9 and 10 because, unlike all other items, they did not clearly represent caregiver-initiated acts of utilization and had lower factor loadings. The final model had an acceptable fit, $\chi^2[13] = 25.84$, $p < .05$, RMSEA = .067, CFI = .959, TLI = .933, SRMR = .042. The factors were named "self-encouragement and acceptance" (SEA; items 2, 6, 14, and 15) and "self-care" (SC; items 5, 11, and 12). Figure 2 displays the final factorial model. An overview of the items included in the final models can be seen in Table 2 along with items of the PRUQ-CD from Töpfer and Wilz (2018).

Reliability

When we used the whole dataset, internal consistencies of the scales were α = .78 for URRWB, α = .71 for SEA, and α = .75 for SC. Over 3 months, the test-retest reliabilities within the control group of the intervention study were $r = .55$ for URRWB, $r = .57$ for SEA, and $r = .57$ for SC.

Convergent and Discriminant Validity

SEA had moderate correlations with URRWB ($r = .32$) and SC ($r = .37$). However, the correlation between URRWB and SC was very high (r = .76). Therefore, and because of a substantial overlap in the wording of two of the SC items with items from the URRWB scale, we dropped the SC scale and excluded it from further analyses. Table 3 presents the intercorrelations between the remaining two scales and correlations with other scales.

The correlations of the two psychosocial resource utilization scales with both the BI and the EBI ($r = -.02$ to $r = .15$) ranged from nonsignificant to low, confirming divergent validity.

The correlation of URRWB with self-efficacy regarding caregiving ($r = .07$) was not significant, and its correlations with SPSI-R:S NPO and PAC were small ($r = -.12$ and .13), which did not confirm convergent validity. However, SEA moderately correlated with these three measures, and both psychosocial resource utilization scales showed moderate correlations with GBB-24 complaints, CES-D depression, and SCQ-AV burden in the expected negative direction, which confirmed convergent validity.

Compared to the URRWB scale, SEA correlated slightly less with physical health complaints and SCQ-AV burden but more with SCQ-AV self-efficacy, SPSI-R:S NPO, and PAC.

Discussion

The purpose of the present study was to clarify the dimensionality of two sets of questions, developed to measure the utilization of resources related to well-being and coping with daily hassles, respectively, and to examine the psychometric properties of the identified scales. The first set of items had one underlying dimension called "utilization of resources related to well-being" (URRWB) that consisted of four items covering aspects of relaxation and self-reflection as well as pleasurable activities. The factorial model for the second set of items included two factors called

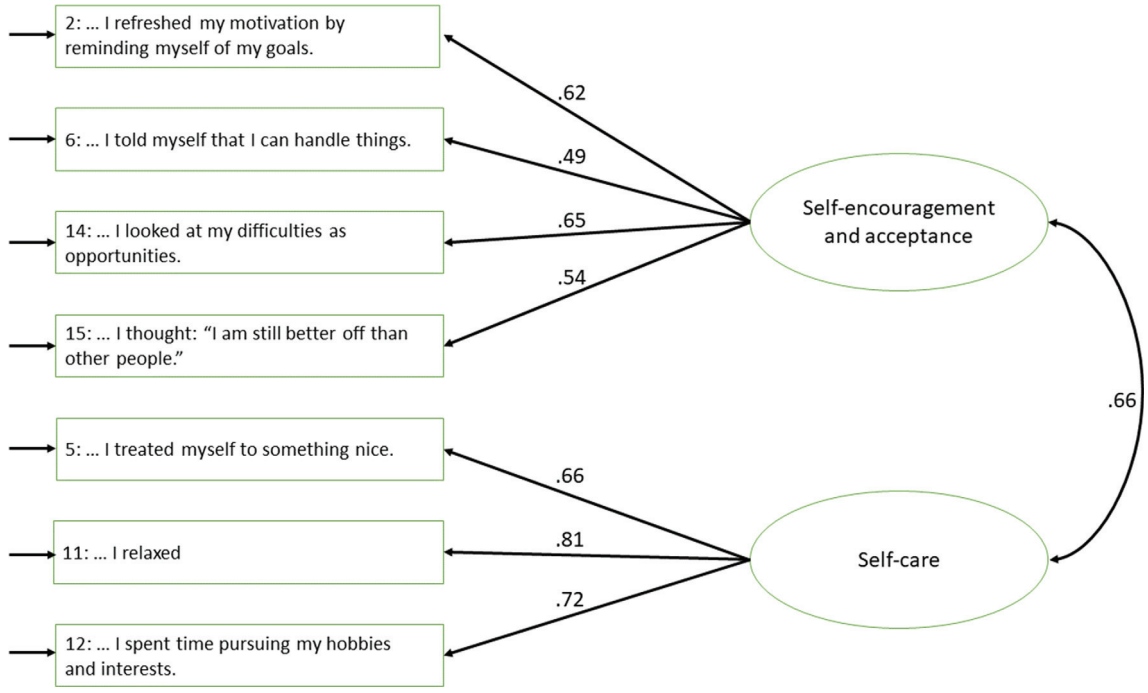

Figure 2. Final factor model for "Utilization of resources related to coping with daily hassles." Factor loadings are standardized.

Table 3. Correlations and internal consistencies

Variable	1	2	3	4	5	6	7	8	9	10
1. URRWB	(.78)									
2. SEA	.32***	(.71)								
3. GBB-24 complaints	−.35***	−.20***	(.92)							
4. CES-D depression	−.41***	−.45***	.60***	(.90)						
5. SCQ-AV self-efficacy	.07	.29***	−.32***	−.49***	(.72)					
6. SCQ-AV burden	−.39***	−.25***	.41***	.55***	−.47***	(.82)				
7. SPSI-R:S NPO	−.12*	−.24***	.35***	.48***	−.46***	.30***	(.84)			
8. PAC	.13**	.43***	−.17***	−.42***	.39***	−.27***	−.23***	(.85)		
9. BI	.15**	−.02	−.06	−.01	−.12*	−.15**	.08	−.08	(.87)	
10. EBI	.14**	.06	−.04	−.11*	.03	−.24***	.01	.06	.40***	(.72)

Note. Cronbach's alphas are shown in the diagonals. URRWB = Utilization of resources related to well-being; SEA = Self-encouragement and acceptance; GBB-24 = Giessen Subjective Complaints List; CES-D = Centre for Epidemiological Studies Depression scale; SCQ-AV = Sense of Competence Questionnaire; SPSI-R:S = Social Problem Solving Inventory–Revised (short version); NPO = Negative problem orientation; PAC = Positive Aspects of Caregiving; BI = Barthel Index; EBI = Extended Barthel Index. *$p < .05$; **$p < .01$; ***$p < .001$.

"self-encouragement and acceptance" (SEA) and "self-care" (SC) with four and three items, respectively; SC was finally excluded because of high redundancy with URRWB. The scales URRWB and SEA had sufficient reliability, showed divergent validity to scales focusing on care-recipients' cognitive and functional impairment, and sufficient convergent validity to scales measuring physical health complaints, caregiver burden, and depression of the caregiver. Utilization of SEA, as a resource for coping with daily hassles, was more strongly related to self-efficacy regarding caregiving, negative problem orientation, and positive aspects of caregiving compared to URRWB. Caregiver burden was more strongly negatively correlated with the URRWB, which is consistent with findings from Töpfer and Wilz (2018). Thus, higher utilization of resources related to well-being might buffer negative caregiving experiences, while lower levels can also result from overburdened caregivers reducing their utilization of resources related to well-being (Schüz et al., 2015).

While the unidimensionality of URRWB aligns with the conception of Töpfer and Wilz (2018), SEA captures only one specific facet of the utilization of resources related to coping with daily hassles. Positive self-verbalization and acceptance have long been employed and validated as

efficient coping strategies in cognitive behavioral therapy (Alberts et al., 2012; Bodenmann et al., 2002; Cook & Hayes, 2010; Lange et al., 1997). For example, acceptance-based coping with negative emotions proved to require fewer resources than suppression and is associated with better psychological health (Alberts et al., 2012; Cook & Hayes, 2010). Furthermore, evidence suggests that self-encouragement, as a functional coping strategy, correlates with higher self-esteem, general self-efficacy, and fewer feelings of shame (Redden et al., 2023; Romppel et al., 2013). Therefore, the utilization of self-encouragement and acceptance seems to be important for coping with daily hassles. However, other forms of resource utilization to cope with daily hassles might exist. Beyond self-encouragement, there could be other forms of positive self-verbalizations, like those fostering active orientation and planning. Self-care might also be a relevant form of resource utilization related to coping with daily hassles. Conceptually, self-care might overlap with URRWB, though they serve different motivational goals. For example, relaxation and pleasurable activities can both be utilized to achieve both well-being and cope with stress. Caregivers may tend to use the same strategies for different purposes. Nonetheless, conceptually differentiating between processes that reduce caregiver distress and those that enhance positive experiences might be valuable, e.g., by drawing on the tenets of positive psychology (Lopez et al., 2003). In the current study, the similarity in wording did not allow for a clear differentiation between self-care as a utilization of resources related to coping with daily hassles from URRWB. The URRWB and SEA scales were significantly (but only moderately) correlated, suggesting they are sufficiently distinct but related. Caregiver research has increasingly adopted two-process or two-factor models (Crellin et al., 2014; Pinquart & Sörensen, 2004). In the multiple mediation analyses conducted by Töpfer and Wilz (2021), both utilization of resources related to well-being and coping with daily hassles predominantly exerted distinct and unique indirect effects on the caregiver's quality of life. This supports treating them as distinct but interrelated mechanisms. Accordingly, the current study introduces two interrelated scales that efficiently measure two important aspects of psychosocial resource utilization in family caregivers.

Limitations and Suggestions for Future Research

One limitation of the factorial analysis on the utilization of resources related to coping with daily hassles is that two items pertaining to a factor covering "retreating from the situation" had to be cut because of a Heywood case with item 7 ("I withdrew from the situation"), so that item 4 ("I distanced myself from the situation") also had to be dropped as the only item left for this factor. However, withdrawing from the situation could be misinterpreted as a dysfunctional avoidant and depressive form of coping. Temporary distancing, on the other hand, might be a functional coping strategy protecting caregivers from exhaustion and/or rash and impulsive behavior. Therefore, further research could develop more and less ambiguous items pertaining to this protective dimension of coping with daily hassles by temporarily retreating from the situation. Furthermore, the self-care scale had to be dropped because of a very high correlation with URRWB. Developing a self-care scale with more distinct wording might make this facet of utilizing resources related to coping with daily hassles a valuable addition to SEA. Moreover, one could develop further scales focusing on orientation, planning, or problem-focused coping as well as test the measurement invariance of the instruments in future studies across treatment groups, time, gender, and cultural/ethnic groups.

In this study, we focused on the German version of the questionnaire. Table 2 provides an English translation of the items for the convenience of English-speaking researchers and practitioners. It is important to note that this translation adopts a meaning-based approach to enhance understandability and naturalness for English-speaking participants and includes some items already published as part of the Töpfer and Wilz (2018) questionnaire. Because our investigation was conducted using the German version, we need future research to replicate these findings for the English version. Such research might also consider using a more literal translation of some of the items, as found in the notes accompanying Table 2. Finally, testing the responsiveness of the psychosocial resource utilization scales is still pending. However, there are promising results for the PRUQ-CD (Töpfer & Wilz, 2018).

Conclusions

The analysis yielded a unidimensional structure for URRWB (4 items) and SEA (4 items) as a distinct scale for utilizing resources related to daily hassles. Assessing the utilization of resources related to well-being is of great importance since caregivers commonly reduce or forgo leisure and health-promoting activities (Schüz et al., 2015) and since increases in utilization of such resources mediate intervention effects on depression and quality of life (Losada et al., 2011; Töpfer & Wilz, 2021). Regarding the utilization of resources for coping with daily hassles, SEA assesses efficient coping strategies already shown to be important for managing stressors in various studies (Alberts et al., 2012; Cook & Hayes, 2010; Redden et al., 2023; Romppel et al., 2013), including studies with family caregivers (Collins & Kishita, 2019). Since family caregivers

encounter a plenitude of burdensome challenges daily, utilizing resources for coping with these hassles is highly relevant. The two scales URRWB and SEA provide researchers and clinicians with feasible instruments for the economic assessment of two aspects of psychosocial resource utilization of family caregivers in prevention and intervention.

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History
Received September 6, 2023
Accepted February 19, 2024
Published online March 27, 2024

Conflicts of Interests
All authors declare no support from any organization other than the German Federal Ministry of Education and Research for the submitted work; no financial relationships with any organizations

or activities that could appear to have influenced the submitted work. GW and KP received fees (2018–2020) for the development of an online coach for family caregivers of the AOK Bundesverband (Federal Association of Local Health Insurance Funds). KP is training care counselors of nursing care insurances and local advice centers.

Open Data
Trial registration: Deutsches Register Klinischer Studien (German Clinical Trials Register), DRKS00014593 (www.drks.de, registered 14 May 2018) and International Clinical Trials Registry Platform, DRKS00014593 (https://apps.who.int/trialsearch/).

Editorial Note
The acting editor was Jana Nikitin.

Funding
The study is fully funded by the German Federal Ministry of Education and Research, grant no. 01GL1702 (9/2017 to 8/2021, extended until 8/2022). The funding source and its project execution organization (DLR) are not involved in the study design, writing of the manuscript, and decisions to submit articles for publication. The ReDiCare study group conducted the trial under the direction of Klaus Pfeiffer (Department of Clinical Gerontology and Geriatric Rehabilitation, Robert Bosch Hospital, Stuttgart, Germany) and Gabriele Wilz (Department of Counseling and Clinical Intervention, Department of Psychology, Friedrich Schiller University Jena, Germany). Gisela Büchele (Institute of Epidemiology and Medical Biometry, Ulm University, Germany) was responsible for data management and electronic data archiving. Ana Babac ("AOK Bayern – Die Gesundheitskasse," Munich, Germany) and Maria Gonzalez Medina ("AOK Baden-Württemberg") were responsible for recruitment. The ReDiCare study group further consists of Dietrich Rothenbacher (Institute of Epidemiology and Medical Biometry, Ulm University), Christina Theurer, Doreen Rother, Maximilian Diepold, Grit Stößel, Nicolas Wrede (Department of Counseling and Clinical Intervention, Friedrich Schiller University Jena), Marianna Hanke-Ebersoll, Lisa Daufratshofer, Annabella Gottswinter ("AOK Bayern – Die Gesundheitskasse"), Elisabeth Reinhardt ("AOK Baden-Württemberg"), Helene Passon and Christian Ernst (Institute of Health Care and Public Management, University of Hohenheim, Stuttgart, Germany), Thomas Heidenreich, Astrid Elsbernd and Maja Reuter (Faculty Social Work, Health Care and Nursing Sciences, University of Applied Sciences, Esslingen). Members of the independent data monitoring and safety committee were Martin Hautzinger (University of Tuebingen), Susanne Zank (University of Cologne), and Martina Schäufele (University of Applied Sciences Mannheim). Further experts in the committee with specific expertise in the personal rights of caregivers and care-recipients were Frank Oswald and Marina Wellenhofer (University of Frankfurt), and Sabine Jansen (German Alzheimer Association). We thank all family caregivers for their participation.
Open access publication enabled by the Friedrich Schiller University Jena.

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