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UNDERSTANDING CHALLENGING BEHAVIOUR IN OLDER PEOPLE; THE DEVELOPMENT OF THE CONTROLLABILITY BELIEFS SCALE

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Abstract. Carers' beliefs about the controllability of challenging behaviour have been shown to be related to their emotional and behavioural responses to such behaviour. This paper describes the psychometric properties of a new 15-item scale that assesses such beliefs. The scale has good internal reliability and a two-factor structure representing positive and negative beliefs about controllability. The negative beliefs about controllability sub-scale correlate highly with a wishful-thinking coping style but not with a practical problem-solving coping style. The clinical use of this scale is discussed.

Keywords: Attributions, challenging behaviour, carers, controllability, measurement, psychometrics.

Introduction

The challenging behaviour of older people with dementia and other impairments can be formulated as a communication of unmet need (Woods, 2001); this highlights the interactive nature of challenging behaviour. The responses of carers to challenging behaviour may be seen as mediated by the beliefs that carers have about the reasons for and appropriate responses to such behaviour. This cognitive approach places the meaning attributed to events and behaviours as central in determining the carer's emotional and behavioural response to the older person's challenging behaviour. One particular cognitive model, attribution theory, has been applied to "helping" behaviour. Attribution theory is concerned with the ways in which individuals initiate

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causal explanations for the phenomena around them and the way in which these perceptions affect their emotions and reactions to events. Weiner (1980) suggests that there are attributions of controllability (whether the cause of a behaviour or event is under the person's control) and of stability (whether the cause of a behaviour or event is likely to change over time). He argues that attributions will determine the emotional reactions of sympathy or anger in the observer, and consequently advance or reduce the likelihood of help. Thus, a carer will be more sympathetic and hence more helpful if the cause of someone's challenging behaviour is seen as outside that person's control (for example, due to their dementia or their environment). Conversely, a carer will be more angry and less helpful if the cause of someone's challenging behaviour is seen as within that person's control (for example, they are seen as "knowing what they are doing"). This model has been supported by studies of carers in the learning disability field where the attribution of control has shown to be related to negative emotions and less intended helping behaviour (e.g. Dagnan, Trower, & Smith, 1998) and by studies with older family carers where the diagnostic label of Alzheimer's disease and depression facilitated compassion and sympathy (e.g. Wadley & Haley, 2001).

The attribution of control will be particularly important for people caring for people whose communicative and cognitive abilities are changing; people may tend to assume greater levels of control and understanding than are rationally justified. This paper describes a theoretically focused scale developed to access beliefs of controllability in carers.

Method

Participants

There were 142 participants in the study, all of whom were paid carers of older people. Participants were from five physical health wards (mainly stroke rehabilitation and cardio-vascular wards), six mental health settings (mainly dementia units), and five nursing homes (providing both Elderly Mentally Ill and residential care). Demographic data were available for 102 people; 82 (80.4%) were female, and 20 (19.6%) were male. For the purpose of this study, participant age was banded; two (2.0%) people were younger than 20 years, 16 (15.7%) were between 21 and 30 years, 30 (29.4%) were between 31 and 40 years, 26 (25.5%) were between 41 and 50 years, 28 (27.5%) were between 51 and 60 years. Fifty (49.0%) participants were qualified (nurses, home/ward managers) and 52 (51.0%) were unqualified (nursing assistants, care assistants).

Measures

The Controllability Beliefs Scale. This is a new 15-item measure. Items were generated by the first author based on clinical work with staff carer groups. Items reflect the statements carers make about control in clinical contexts. The scale is presented to carers with the following instructions.

> "Listed below are thoughts that a person may have when dealing with an older person with challenging behaviour. Think about challenging behaviour that you have experienced from a client recently. For each thought please put a tick in the box that shows how much you agree with each statement"

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The scale is scored on a 5-point scale with anchored ratings of agree strongly, agree slightly, unsure, disagree slightly, disagree strongly. Ten of the scale items are worded such that agreement indicates a perception of high control (for example, item 5, "They know what they are doing"), five items are worded such that agreement indicates a perception of low control (for example, item 9, "They don't mean to upset people"). The five positively worded items are reversed scored so that a higher score on every item indicates endorsement of beliefs of control.

The Shortened "Ways of Coping" Questionnaire (*SWC-R*; Hatton & Emerson, 1994) was completed by 43 participants to provide initial data on the predictive validity of the new scale. The SWC-R measures the use of Practical Problem Solving and Wishful Thinking coping strategies employed by direct care staff. Practical Problem Solving relates to coping with a stressful situation by attempting to change it; this variable is related to a variety of positive outcomes for carers of people with learning disabilities (Hatton & Emerson, 1994). Wishful Thinking involves attempting to cope with one's feelings of a stressful event, whilst not trying to alter the situation (an avoidant coping style); this variable has been shown to be related to negative outcomes for carers of people with learning disabilities such as psychological distress (Hatton & Emerson, 1994). Each item describes a particular coping strategy and participants rate them on a 4-point Likert scale.

Results

The mean scores and standard deviations for each item in the thoughts about challenging behaviour questionnaire are presented in Table 1. The distribution of scores for each scale item was checked and none significantly deviated from a normal distribution. The mean scores for the full scale were 49.47 ($SD = 12.96$; range 15–75). Most items were significantly correlated (see Table 2), suggesting that factor analysis is an appropriate procedure. The scale was subjected to a principle components factor analysis with a varimax rotation. Examination of the scree plot suggested a two-factor solution as most parsimonious; the two factors reflect positive statements regarding control and negative statements regarding control. The factor loadings for these factors are shown in Table 1. The two factors are labelled, "high control" and "low control"; the means, standard deviations and ranges for these sub-scales are 33.31 ($SD = 10.40$; range 10–50) and 16.12 ($SD = 4.73$; range 5–25) respectively.

Cronbach's alpha was calculated for the full scale (standardized alpha = 0.89) and for subscales: high control (standardized alpha = 0.92); low control subscales (standardized alpha = 0.73). Internal reliability was further examined using corrected item-total correlations. These are presented in Table 1 for the full scale and for the two separate subscales. The item-total correlation analysis suggests that there is a reasonably high degree of internal consistency for the whole scale and for the two factor derived subscales.

Forty-three participants completed both the Controllability Beliefs scale and the Shortened Ways of Coping questionnaire. The mean scores for the two SWC-R subscales were 10.93 ($SD = 3.86$) for the Wishful Thinking scale, and 18.27 ($SD = 4.91$) for the Practical Problem Solving scale. The correlations between the SWC-R subscales and the Controllability Beliefs scale provide an initial evaluation of predictive validity. It would be expected that perceptions of high control would be associated with a Wishful Thinking coping style, since Weiner's model suggests that perceptions of high control would be associated with negative emotions

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Table 1. Descriptive and psychometric data for the Controllability Beliefs Scale

	Mean	*SD*	Factor 1	Factor 2	Item total for full scale	Item total for Factor 1	Item total for Factor 2
1. They are trying to wind me up	3.40	1.53	0.79	0.12	0.70	0.74	
2. They can't help themselves	3.17	1.40	0.17	0.72	0.41		0.57
3. They are doing it deliberately	3.35	1.45	0.85	0.06	0.72	0.79	
4. They know what they are doing	3.14	1.22	0.67	−0.05	0.50	0.57	
5. They have no control over their behaviour	2.99	1.26	−0.10	0.74	0.20		0.44
6. They could stop if they wanted	3.20	1.25	0.80	0.16	0.73	0.76	
7. They are trying to manipulate the situation	3.31	1.25	0.66	0.05	0.54	0.59	
8. They can think through their actions	3.14	1.27	0.68	0.27	0.66	0.65	
9. They don't mean to upset people	3.47	1.30	0.15	0.72	0.40		0.53
10. They are in control of their behaviour	3.29	1.27	0.78	0.10	0.67	0.73	
11. They mean to make me feel bad	3.54	1.56	0.73	0.27	0.71	0.71	
12. They have chosen to behave in this way	3.51	1.51	0.81	0.13	0.72		0.52
13. They are not to blame for what they do	3.24	1.42	0.13	0.73	0.38	0.77	
14. They know the best time to challenge	3.25	1.38	0.70	0.21	0.66		0.40
15. They don't realise how it makes me feel	3.27	1.44	0.43	0.47	0.53	0.68	

Table 2. Bivariate correlations between items of the Controllability Beliefs Scale. Item numbers relate to items identified in Table 1

Item number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1															
2	*0.24*														
3	*0.70*	*0.19*													
4	*0.47*	0.07	*0.58*												
5	−0.02	*0.44*	−0.02	−0.07											
6	*0.58*	*0.30*	*0.65*	*0.48*	*0.06*										
7	*0.55*	0.10	*0.52*	*0.33*	0.01	*0.55*									
8	*0.46*	*0.29*	*0.56*	*0.40*	*0.14*	*0.57*	*0.36*								
9	*0.25*	*0.37*	0.15	0.08	*0.34*	*0.19*	*0.19*	*0.22*							
10	*0.52*	*0.24*	*0.57*	*0.48*	0.01	*0.60*	*0.41*	*0.61*	*0.17*						
11	*0.61*	*0.23*	*0.58*	*0.38*	0.11	*0.59*	*0.43*	*0.46*	*0.41*	*0.59*					
12	*0.60*	*0.21*	*0.67*	*0.46*	0.06	*0.64*	*0.43*	*0.53*	*0.23*	*0.67*	*0.71*				
13	*0.20*	*0.37*	*0.21*	0.14	*0.36*	*0.15*	*0.18*	*0.25*	*0.53*	*0.11*	*0.26*	*0.17*			
14	*0.57*	*0.26*	*0.55*	*0.39*	*0.17*	*0.54*	*0.56*	*0.50*	*0.22*	*0.53*	*0.46*	*0.55*	*0.22*		
15	*0.39*	*0.42*	*0.36*	*0.29*	*0.20*	*0.45*	*0.19*	*0.45*	*0.27*	*0.39*	*0.37*	*0.35*	*0.32*	*0.30*	

Note: Figures in italics signify correlations significant at $p < .05$.

and a tendency not to engage in helping behaviour. Pearson's correlations for the full-scale score for the Controllability Beliefs scale with the Wishful Thinking and Practical Problem Solving scores of Shortened Ways of Coping questionnaire were $r = 0.46$ ($df = 41, p < .05$) and $r = 0.05$ ($df = 41$, ns) respectively. This suggests that beliefs of controllability are associated with a coping style that is emotion focused but not one that is problem solving focused. The high and low control subscales of the Controllability Beliefs scale were also correlated with Wishful Thinking and Practical Problem Solving. The high control statement factor was correlated with these coping styles, with results of $r = 0.49$ ($df = 41$, $p < .05$) and $r = 0.10$ ($df = 41$, ns) respectively. The low control statement subscale was correlated with the coping styles, with results of $r = 0.05$ ($df = 41$, ns) and $r = –0.07$ ($df = 41$, ns) respectively. Thus situations were carers did not consider clients' had control over their actions or events were not associated with either of the carer coping styles.

Discussion

This paper has presented the psychometric properties of a new 15-item Controllability Beliefs scale. The scale has good internal reliability with high Cronbach's alpha, acceptable corrected item-total correlations, and a clear factor structure indicating high control and low control beliefs as two distinct factors. It could be suggested that this factor structure is an artefact of question wording. However, a number of other cognitive scales (for example, self-esteem scales; Andrews, 1998) also have a factor structure that identifies positive and negative beliefs about the same construct as relatively independent. The full-scale score for the Controllability Beliefs scale correlates with a Wishful Thinking coping style, but not with a Practical Problem Solving style. Interestingly, the high control statements subscale correlates in a similar manner

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although the low control statements subscale does not correlate with either of the measured coping styles. It is possible that the wording of these items is assessing an accepting perspective on controllability, which does not provoke an emotional or active problem solving approach. Future research with the scale should examine the correlates of both subscales in order to further develop understanding of how particular styles of thinking about challenging behaviour may be related to particular styles of carer coping and behaviour.

The perception of controllability is an important factor in understanding carers' responses to and interventions with people with challenging behaviour. Interventions that encourage carers to examine their beliefs and emotional responses are potentially important. Such interventions might include education regarding the effects of ageing and disability and reflection on how these factors support or challenge carers' judgements of controllability of behaviour. Ultimately, the aim would be to shift the formulation of challenging behaviour from one that suggests that such behaviour is controllable, which may be associated with high anger towards the client, to a formulation that recognizes the historical and ecological context of the client's behaviour. Such formulations would suggest that the client might be experiencing emotions such as fear or anxiety, which may increase sympathy and reduce potential anger towards the person. Thus, intervention would be aimed at enabling carers to explore different formulations of the person's challenging behaviour. The Controllability Beliefs scale and its sub-scales may thus be useful in evaluating outcomes of such staff support interventions.

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