

RESILIENCE TRAINING FOR PEOPLE WITH MULTIPLE SCLEROSIS (MS): THE READY FOR MS PROGRAM

Kenneth Pakenham

School of Psychology, The University of Queensland (Australia)

Abstract

This presentation provides a narrative review of a novel acceptance and commitment therapy (ACT) resilience training group program for people with multiple sclerosis (PwMS) called READY for MS. The intervention targets the six ACT psychological flexibility (PF) skill sets: acceptance, mindfulness, defusion, self-as-context, values and committed action. READY for MS has 7 modules plus a booster. Quantitative and qualitative data from 8 studies (n = 628) evaluating the intervention impacts on psychosocial outcomes for PwMS will be summarised. These studies include 4 randomised control trials (n = 384), one effectiveness trial (n = 137) and 3 feasibility studies (n = 137). Studies have evaluated in-person group, self-directed digital and video conferencing delivery formats across different cultures (Australia, UK, Greece, Italy, Germany) and settings (e.g., hospitals, community clinical care centres). Qualitative and statistical results show significant improvements in quality of life (QoL), mental health and PF in PwMS who undertake READY for MS. Evaluations of the effects on healthcare professionals of training in READY for MS show significant improvements in resilience, wellbeing, and PF in trainees. Mediation analyses show that PF, the theoretical putative change mechanism, mediates the post-intervention improvements in mental health and QoL for PwMS and healthcare trainees. Overall, research evidence supports the efficacy and effectiveness of the READY for MS program in promoting mental health, QoL and PF in PwMS, with potentially similar benefits for healthcare professionals trained in the intervention. Evidence supports the theoretical integrity of the intervention and its efficacy across different delivery formats. The efficacy of READY for MS across cultures supports its applicability internationally. Evidence also suggests that the program can be effectively delivered to other chronic illness groups without significant changes to intervention content (e.g., cancer, heart disease).

Keywords: *Resilience, quality of life, mental health, acceptance and commitment therapy, chronic illness*

1. Introduction

The READY for MS program was derived from its parent intervention called READY. Therefore, the term 'READY' refers to the parent program and the term 'READY for MS' refers to the modified version of READY for PwMS. READY is based on Acceptance and commitment therapy (ACT), a modern variant of cognitive behavior therapy. Psychological flexibility (PF), the framework underpinning ACT, is the cornerstone of psychological health and is associated with resilience. The ACT PF framework postulates that six core processes enhance PF: (1) acceptance, (2) defusion, (3) mindfulness, (4) self-as-context, (5) values, (6) committed action. Evidence indicates that these skill-sets foster resilience (Pakenham et al., 2024). In READY these skill-sets target five research identified key resilience protective factors: (1) positive emotions; (2) cognitive flexibility, (3) life meaning, (4) social support, and (5) active coping (Burton, Pakenham & Brown, 2010). Informed by this theoretical and empirical research, we created a READY resilience model metaphorically described as a shield, which is composed of five life domains (thinking, feeling, doing, relations, being). Within each life domain, a key resilience protective factor is targeted. These protective factors reflect one or more of the PF processes.

1.1. The standard READY program

The original standard READY program has 11 modules: (1) introduction to the READY model, (2) physical activity, (3) mindfulness, (4) defusion, (5) self-as-context, (6) acceptance, (7) mid-review, (8) values, (9) social connectedness, (10) relaxation and pleasant activities, and (11) final review. Program strategies include psychoeducation, experiential exercises, self-reflection, self-monitoring, and home practice assignments. Modules are delivered weekly in 2.5-hour group sessions with 8-20 participants.

Participants receive a workbook that has two components: (1) written module content and (2) the READY Personal Plan which is comprised of in-session and home practice exercises. The Personal Plan constitutes a personalized resource to help participants apply program information and strategies. Participants also receive an audio file of guided meditations and relaxation exercises. A facilitator manual provides program instructions and session content.

READY has been effectively applied to workplace settings (Burton et al., 2010), colorectal cancer survivors (Hawkes et al., 2013; Hawkes et al., 2014), people with diabetes (Ryan et al., 2018), people with congenital heart disease (Steele, 2016), and PwMS. Regarding the latter, it is the READY for MS version of the READY program that is the focus of this presentation.

2. READY for MS

The READY program was modified to reduce participation demands given the high prevalence of MS fatigue and disability. The 11 modules were reduced to seven and a booster session was introduced 5 weeks after the 7th module. The participant handbook and facilitator manual were revised accordingly.

Eight published studies have evaluated READY for MS. The design characteristics of these studies are summarized in Table 1. Four studies are randomised control trials, and of these, two used an active control (relaxation). Most participants in each study were female which reflects the fact that MS more commonly occurs in females than males. The mean age varied from 39 to 49 years which aligns with the onset of MS typically occurring in young adulthood. Most participants reported a relapse remitting course of MS which is more common than primary or secondary progressive courses. Five studies used group delivery. Three studies developed and evaluated self-directed online versions of READY for MS. Six studies incorporated follow-up assessments beyond the post-intervention assessment.

Table 2 summarises the outcomes evaluated across the eight studies and indicates outcomes that significantly improved at post-intervention and follow-up. Direct quantitative comparisons of intervention effects across studies are not possible given the marked variations in study designs, intervention delivery modes, and cultural contexts. All but one of the studies evaluated resilience. Resilience improved in only two studies. These improvements were identified at follow-up, indicating delayed intervention effects for resilience. This is possibly due to resilience building benefits only emerging after sufficient time has elapsed for practicing the complex array of PF skills. For the seven studies that measured distress, one or more of the distress dimensions (anxiety, depression, stress) significantly improved. Intervention effects on QoL were evidenced in four studies. The beneficial intervention effects were also evident on other outcomes including self-efficacy, employment stability, and wellbeing.

Given that READY for MS is informed by the ACT PF framework it is important to demonstrate that the intervention increases the six PF processes which the intervention targets. One or more of the PF processes significantly improved in six of the eight studies. Additionally, one or more of the PF processes mediated the improvements in adjustment or QoL outcomes that significantly improved in studies that undertook mediation analyses. Furthermore, one study showed that the PF processes mediate the link between resilience and QoL and distress in PwMS, which supports the role of PF processes as resilience building skills. Together these findings support the theoretical integrity of the READY for MS program.

All studies used a mixed methods approach, collecting both quantitative and qualitative data. Qualitative data were collected via open-ended survey questions and or structured interviews. Qualitative results across all studies identified themes that reflected the positive intervention effects on various life domains including managing MS, coping with distress, enhancing QoL, being more resilient, and increasing self-awareness. All studies collected participant satisfaction ratings regarding READY for MS. Mean ratings for all studies were above the middle anchor on the Likert satisfaction rating scales.

2.1. Impacts of READY for MS Training on healthcare professionals

Two studies have evaluated the impacts on trainees who receive training in the delivery of the READY for MS program (Pakenham, Scott, & Messmer Uccelli, 2018; Giovannetti et al., 2022c). Findings from these studies show that this training has positive impacts personally and professionally. Notably, trainees improved over the course of training in resilience, positive affect, wellbeing, and PF.

3. Conclusions

Quantitative and qualitative data collected from evaluations of the READY for MS program converge on the positive impacts of the intervention across a wide range of psychosocial outcomes for PwMS and healthcare professionals who engage with the program. The fact that both PwMS and healthcare professionals have benefited from the program, underscores the trans-diagnostic processes underpinning the intervention. Evidence suggests the program can be flexibly applied across a range of contexts including cultures. Preliminary data suggest effective program delivery via group face-to-face, group video conferencing, and digital modes. Importantly, findings support the program's theoretical integrity.

Table 1. READY for MS Studies: Design Characteristics.

Study Country	N [intervention: control]	% Female	Mean Age (SD) Years	MS Course		MS Duration Mean (SD) Years	Delivery Mode	Control Group	Follow-up
				Relapse remit %	Progressive %				
Pakenham et al, 2018 Australia	37	73.0	49.30 (11.27)	78.4	21.6	9.42 (8.49)	In-person group	NA	3 months
Giovannetti et al 2020 Italy	39 [20:19]	59.0	45.7 (9.10)	81.0	19.0	12.20 (10.7)	In-person group	Relax	3 months 6 months
Giovannetti et al 2022a Italy	137	75.1	45.10 (10.50)	81.0	19.0	11.20 (8.8)	In-person group	NA	3 months
Giovannetti et al 2026; 2022b Italy	197 [105:92]	66.9	45.03 (10.55)	84.3	15.7	12.98 (10.15)	In-person group	Relax	3 months 6 months
Pakenham & Landi 2023 Australia	56 [31:25]	85.5	48.48 (13.08)	91.9	9.0	48.48 (13.08)	Online	Waitlist	3 months
Wicks et al United Kingdom	92 [45:47]	85.2	45.67 -	85.9	14.1	-	Online	Usual care	6 months
Poettgen & Pakenham, 2026 Germany	19	79.0	39.01 -	89.5	10.5	8.68	Online	NA	NA
Theodorou et al Greece	51	62.9	41.84 -	-	-	-	Group video conferencing	NA	NA

Table 2. READY for MS Studies: Outcomes.

Study Country	Outcomes Assessed		Improvement Post-intervention		Improvement Follow up	
	Adjustment QoL	ACT Processes	Adjustment QoL	ACT Processes	Adjustment QoL	ACT Processes
Pakenham et al, 2018 Australia	Resilience QoL Anxiety Depression Stress	Mindfulness Defusion Acceptance Values	QoL physical QoL mental Depression Stress	Defusion Values Acceptance	Resilience	Mindfulness Defusion
Giovannetti et al, 2020 Italy	Resilience QoL Anxiety Depression Stress	Psych Flex Mindfulness Acceptance Values Defusion				
Giovannetti et al, 2022a Italy	Resilience Anxiety Stress QoL	Psych Flex Acceptance Defusion Values	Resilience Anxiety Stress QoL	Psych Flex Acceptance Defusion Values	Resilience	
Giovannetti et al, 2026; 2022b Italy	Resilience Anxiety Depression Affect Well-being QoL	Psych Flex	QoL Defusion		QoL Depression Anxiety Well-being	Psych Flex Self-as- context Defusion Values
Pakenham & Landi 2023 Australia	Resilience QoL Anxiety Depression Stress	Psych Flex	Anxiety Stress			
Wicks et al, 2022 United Kingdom	Work instability Self-efficacy Anxiety Depression MS impact QoL	Psych Flex	Work instability Self-efficacy Anxiety MS impact	Psych Flex	Work instability Self-efficacy Anxiety MS impact	Psych Flex
Poettgen, & Pakenham, 2026 Germany	Resilience QoL	Psych Flex/Inflex	Resilience QoL	Psych Flex/Inflex	NA	NA
Theodorou et al, 2022 Greece	Resilience Anxiety Depression Stress QoL	Psych Flex Experiential avoidance	Anxiety Depression Stress	Acceptance Cognitive fusion	NA	NA

Note. NA = not applicable. Psych Flex = Psychological Flexibility. Psych Flex/Inflex = Psychological Flexibility/Inflexibility. QoL = quality of life

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