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Identifying the research priorities for schema therapy: A Delphi consensus study

Pamela D. Pilkington[1] [ORCID] | Rita Younan[2] | Gery C. Karantzas[3] [ORCID]

[1]School of Behavioural and Health Sciences, Faculty of Health Sciences, Australian Catholic University, Fitzroy, Australia

[2]Schema Therapy Institute, Essendon, Australia

[3]School of Psychology, Deakin University, Burwood, Australia

Correspondence
Pamela D. Pilkington, School of Behavioural and Health Sciences, Faculty of Health Sciences, Australian Catholic University, Locked Bag 4115, Fitzroy, Victoria, 3065 Australia.
Email: pam.pilkington@acu.edu.au

Abstract

Despite the popularity of schema therapy, there exist several important gaps in research on the schema therapy model and its effectiveness. The number of gaps makes it difficult to determine the research areas of the highest strategic priority to advance schema therapy. The objective of this study was to establish consensus among schema therapy clinicians and researchers on the priority areas for future schema therapy research. A panel of experts in schema therapy (43 clinicians and 13 researchers) participated in a Delphi consensus study. The research areas rated were developed by interviewing the founder of schema therapy, Jeffrey Young, conducting a focus group with the executive board of the International Society for Schema Therapy and screening recent reviews on schema therapy for recommendations for future research. The panel rated 81 research areas in terms of priority across three rounds. Nineteen research areas were rated by 75% of the panel as 'Very high priority' or 'High priority'. These priorities reflected four broad themes: (1) schema therapy constructs and measures, (2) the theoretical assumptions underlying schema therapy, (3) schema therapy and theory in relation to different contexts and outcomes and (4) schema therapy effectiveness and mechanisms of change. The findings are important for establishing a clear research agenda for the future of schema therapy.

KEYWORDS
cognitive behaviour therapy, Delphi consensus method, early maladaptive schemas, research priorities, schema therapy

1 | INTRODUCTION

In the 1980s, Jeffrey Young (1999, 2003) was motivated to develop schema therapy to assist individuals with pervasive and chronic mental illnesses who were not adequately helped by traditional cognitive therapy (Beck, 1964, 1991, 1993). Schema therapy is an integrative approach that combines aspects of cognitive, psychodynamic, emotion-focused and Gestalt therapies. Schema therapy targets early maladaptive schemas (EMSs): dysfunctional mental representations about oneself and one's relationships with others that are assumed to have origins in negative early life experiences (Young et al., 2003). Schema therapy targets EMSs by providing corrective emotional experiences via the therapeutic relationship, cognitive techniques (e.g., identifying cognitive distortions), behavioural pattern breaking and experiential techniques (e.g., imagery rescripting) (Farrell et al., 2014; Hoffart Lunding & Hoffart, 2016).

Emerging research provides some support for the effectiveness of schema therapy in treating personality disorders (e.g., Arntz et al., 2022; Bamelis et al., 2014), depression (e.g., Carter et al., 2013), eating disorders (Pugh, 2015), substance use (Ball et al., 2005, 2011) and post-traumatic stress disorder (Bourdon et al., 2019; Cockram et al., 2010). Qualitative studies on the acceptability of schema therapy indicate that clients report benefits such as improved insight (de Klerk et al., 2017; Tan et al., 2018), whilst therapists describe the model as providing a valuable framework for conceptualization and treatment (de Klerk et al., 2017).

Nonetheless, reviews of the empirical literature have highlighted gaps in the schema therapy evidence base (e.g., Pilkington, Bishop, & Younan, 2021). Several of the critical theoretical assumptions of the schema therapy model have not received adequate empirical attention, whilst evidence of clinical effectiveness is largely limited to personality disorders (Masley et al., 2012; Taylor et al., 2017). Therefore, some of the claims regarding the associations between components of the schema therapy model (e.g., EMSs develop early in life) and the effectiveness of schema therapy (e.g., the effectiveness of schema therapy for PTSD symptoms) are based on assumed rather than actual knowledge. A clear research agenda is needed to maintain the status of schema therapy as an evidence-based therapy supported by the best available research. Therefore, the current study sought to establish clinician and researcher consensus (using the Delphi method; Jorm, 2015) on the priority research areas needed to advance schema therapy. To contextualize the findings of this study, such that readers can understand the concepts and terms that feature in the reporting of results, we provide a brief overview of the schema therapy model and the state of the evidence underpinning schema therapy and its effectiveness.

2 | THE SCHEMA THERAPY MODEL: FUNDAMENTAL CONCEPTS AND EVIDENCE TO DATE

The four main components of the schema therapy model are (1) EMSs, (2) core emotional needs, (3) schema coping styles and responses and (4) schema modes. Young defined 18 EMSs, organized into five higher order domains: disconnection rejection, impaired autonomy and competence, impaired limits, other-directedness and over-vigilance and inhibition (see Table 1) (Young et al., 2003). EMSs influence how an individual interprets, encodes and responds to their experiences (Young et al., 2003). EMSs are typically assessed in research and clinical practice using the long- and short-form versions of the Young Schema Questionnaire (YSQ) (Young, 2003; Young & Brown, 2005). Recent systematic reviews have generally supported the contention that EMSs are risk factors for psychopathology in adulthood, including depression (Bishop et al., 2021), suicidality (Pilkington, Younan, & Bishop, 2021) and eating disorders (Maher et al., 2022). Nonetheless, the evidence on EMSs has several gaps, particularly in relation to how EMSs are measured and conceptualized. Most confirmatory factor analyses of the long and short versions of the YSQ have reported poor

Key Practitioner Message

- The findings highlight to clinicians the current gaps in research on the schema therapy model and its effectiveness.
- Using the Delphi consensus method, an expert panel of clinicians and researchers have identified and agreed upon a research agenda that can significantly inform the direction of future research in the field of schema therapy.
- The findings highlight the need for considerable emphasis on developing an evidence base regarding the basic science of the schema therapy model, evaluating the effectiveness of schema therapy across a range of clinical presentations and improving our understanding of the mechanisms of change.

fit with the original five-domain model, whilst exploratory factor analyses have yielded divergent results. This has led to confusion and debate regarding the number and content of EMS domains and impacts confidence in the construct validity of the YSQ.

Young theorized that EMSs develop in response to the frustration of unmet core emotional needs, rooted in the interaction between the child's temperament and adversity in their early environment (e.g., emotional neglect; Karantzas et al., 2022; Pilkington, Bishop, & Younan, 2021; Young et al., 2003). Specifically, Young identified five emotional needs as core to EMS formation, based on clinical observations and existing theory: (1) secure attachment; (2) autonomy, competence and identity; (3) freedom to express valid needs and emotions; (4) spontaneity and play; and (5) realistic limits and self-control. In adulthood, the continued frustration of these emotional needs maintains EMSs, whilst learning how to adaptively meet one's emotional needs is considered to attenuate the activation of EMSs (Young et al., 2003). Core emotional needs are a pertinent example of an aspect of schema therapy that has received scarce empirical attention despite their centrality to clinical practice and the underlying theoretical model. Thus far, a measure of core emotional needs in the context of schema therapy has not yet been developed and there has been debate in the field regarding the specific emotional needs that have the most theoretical and clinical relevance.

Alongside EMSs and core emotional needs, coping styles are another critical aspect of the schema therapy model. Young proposed that EMSs can trigger maladaptive coping responses categorized into three types: overcompensation, surrender and avoidance (Arntz et al., 2021; Young et al., 2003). Overcompensation (recently referred to as inversion by Arntz et al., 2021) refers to efforts to behave in a way that is opposite to that of the activated EMS. Avoidance is characterized by behavioural and cognitive efforts to avoid EMS activation. Surrender (recently termed resignation by Arntz and colleagues) refers to the individual resigning themselves to the EMS, by accepting it as true and behaving in ways that align with the EMS. The repeated

TABLE 1 Core emotional needs, schema domains and EMS

Unmet core emotional need	Schema domain	Domain definition	EMS	Representative items from the YSQ-S3
Secure attachments to others	Disconnection/ Rejection	Expectations that one's needs for safety and nurturance will not be consistently met	Emotional deprivation	I have not had someone who really listens to me, understands me or is tuned into my true needs and feelings.
			Abandonment	I worry that people I feel close to will leave me or abandon me.
			Defectiveness shame	I feel that I am not lovable.
			Mistrust abuse	I find it hard to trust other people.
			Social isolation	I do not fit in.
Autonomy, competence and identity	Impaired Autonomy and Performance	Expectations that one will be unable to function independently, protect oneself or succeed in life	Failure	I'm incompetent when it comes to achievement.
			Dependence/ incompetence	I do not feel capable of getting by on my own in everyday life.
			Vulnerability to harm	I feel that a disaster (natural, criminal, financial or medical) could strike at any moment.
			Enmeshment/ undeveloped self	I often feel I do not have a separate identity from my parent(s) or partner.
Realistic limits and self-control	Impaired Limits	Difficulties with frustration tolerance, considering others or following social rules or conventions	Entitlement/ grandiosity	I'm special and should not have to accept many of the restrictions or limitations placed on other people.
			Insufficient self-control/self-discipline	If I cannot reach a goal, I become easily frustrated and give up.
Freedom to express valid needs and emotions	Other-Directedness	An excessive focus on the needs, wants and feelings of others, at the expense of one's own needs and feelings.	Subjugation	I feel as if I have no choice but to give in to other people's wishes, or else, they will retaliate, get angry or reject me in some way.
			Self-sacrifice	I am a good person because I think of others more than myself.
			Approval seeking/ recognition seeking	Lots of praise and compliments make me feel like a worthwhile person.
Spontaneity and play	Over-vigilance and Inhibition	Emphasis on meeting excessively rigid rules and expectations at the expense of self-expression, relaxation and joy	Negativity pessimism	You cannot be too careful; something will almost always go wrong.
			Emotional inhibition	I find it embarrassing to express my feelings to others.
			Unrelenting standards/hyper-criticalness	I must be the best at most of what I do; I cannot accept second best.
			Punitiveness	If I make a mistake, I deserve to be punished.

use of maladaptive coping styles in adulthood is assumed to thwart the meeting of one's emotional needs and thus perpetuate EMSs. Increasing awareness of maladaptive coping styles and expanding the client's repertoire of adaptive coping responses are therefore important therapeutic targets in schema therapy. However, the empirical literature on schema coping styles is minimal. According to our bibliometric analysis of the quantitative schema therapy literature, 'coping' appears in the title of less than 2% of articles (blinded for peer review, in press). This knowledge gap may stem from the fact that existing measures of schema coping styles (e.g., the Young–Rygh Avoidance Inventory; Young (1994) were originally intended for clinical use and not for research purposes.

Finally, schema modes were introduced to the model when it became apparent that focusing only on EMSs and coping styles was inadequate for treating individuals with personality disorders, who tend to switch rapidly between affective states and identify with almost all EMSs (Young et al., 2003). Modes are the momentary emotional, cognitive, behavioural and neurobiological states that a person experiences in response to schema activation, particularly when multiple EMSs are simultaneously activated (Young et al., 2003). The schema modes are classified into four categories, with each category comprising either a single mode or multiple modes. These categories are (1) the healthy adult mode, (2) child modes, (3) dysfunctional parent modes and (4) dysfunctional coping modes (Young et al., 2003) (see Table 2).

Schema modes are typically assessed as part of research and clinical practice using a self-report questionnaire—the Schema Mode Inventory (SMI) (Lobbestael et al., 2010). Although mode awareness (i.e., learning to recognize and label mode activation) is a cornerstone of the clinical application of schema therapy, there is a dearth of empirical investigations, with only 7% of the empirical literature on schema therapy focusing on schema modes (blinded for peer review, in press). Lazarus et al. (2020) identified several currently unanswered questions regarding schema modes that illustrate critical gaps in knowledge on schema modes. The key questions raised by Lazarus and colleagues centered on the aetiology of how schema modes develop, whether schema modes have neurological correlates and whether schema therapy focused on mode awareness leads to better treatment outcomes.

In addition to these gaps in empirical evidence regarding the schema therapy model, there are several methodological limitations related to testing the etiological model underlying schema therapy. The schema therapy model emphasizes the developmental origins of EMSs and how these dysfunctional mental representations form across developmental stages in response to early adversity (Young et al., 2003). Thus, comprehensive longitudinal and developmental study designs are best positioned to provide the evidence necessary to support several critical assumptions built into the schema therapy model. However, research to date has tended to rely on adults' retrospective recall of childhood experiences, cross-sectional designs and female-dominant samples (Pilkington, Bishop, & Younan, 2021). Thus, there is minimal evidence that supports the casual assumptions of the model or the extent to which findings generalize to males and those who identify as gender diverse.

3 | SCHEMA THERAPY EFFECTIVENESS

Reviews on the effectiveness of schema therapy have highlighted the limited scope of the literature (Masley et al., 2012; Taylor et al., 2017). Thus far, the evidence is primarily based on non-randomized trials and case studies. High-quality effectiveness studies (i.e., large randomized controlled trials [RCTs]) of schema therapy have been limited to personality disorders (Arntz et al., 2022; Bamelis et al., 2014; Farrell et al., 2009; Giesen-Bloo et al., 2006). Reviews on schema therapy effectiveness by Peeters et al. (2021), Taylor et al. (2017) and Masley et al. (2012) highlight this limitation and have called for larger, adequately powered RCTs that examine whether the change in EMSs is the mechanism of change for symptom improvement. Young acknowledged that a barrier to evaluating schema therapy is the lack of funding for evaluating long-term therapies for personality disorders (Young et al., 2003). Nonetheless, the evidence base for the effectiveness of schema therapy is small relative to other therapies, such as dialectical Behaviour therapy (DBT) (Linehan, 2014; Panos et al., 2014), which was similarly developed in the late 1980s to treat BPD.

TABLE 2 Young's original schema modes

Category	Mode	Mode definition
Healthy adult	Healthy adult	Meets one's emotional needs, by nurturing and protecting the vulnerable child mode and moderating or setting limits on dysfunctional modes.
Child modes	Vulnerable child	Experiences the fear, pain, sadness and anxiety associated with unmet emotional needs and schema activation.
	Angry child	Expresses, protests or acts out anger associated with unmet emotional needs or schema activation.
	Impulsive/ undisciplined child	Acts impulsively and has difficulty delaying gratification or considering others.
	Happy child	Feels joy, love, connection and contentment associated with emotional needs being adequately met and no schemas being activated.
Dysfunctional parent modes	Punitive parent	Shames, criticizes or punishes the self.
	Demanding parent	Pressures the self to meet unrealistically high expectations and standards.
Dysfunctional coping modes	Compliant surrender	Copes with schema activation by being compliant or dependent.
	Detached protector	Copes with schema activation by withdrawing, disconnecting and avoiding schema activation.
	Over-compensator	Attempts to prevent schema activation by being over-controlling, dominating or acting in ways that are opposite to that of the activated EMS.

4 | ESTABLISHING AN AGENDA FOR FUTURE SCHEMA THERAPY RESEARCH

Given that schema therapy has developed considerably since it was first formulated, several of its theoretical and clinical concepts have been under-studied. These gaps in the basic science of the schema therapy models highlight that research could be undertaken in many different areas of the schema therapy model to strengthen its empirical basis. However, with this diversity comes questions regarding which research areas should be prioritized to best advance schema therapy. It is critical that the field identifies and prioritizes areas for investigation to avoid a high volume of disparate studies (Saini et al., 2022). A lack of consensus on research priorities could stifle the development of a strong evidence base (Saini et al., 2022) for both the schema therapy model and its clinical effectiveness. Defining research priorities can also facilitate efficient and meaningful allocation of time, money and effort (Hart & Wade, 2020) to accelerate research in areas that are likely to yield high-value advancements in schema therapy.

5 | THE CURRENT STUDY

The aim of this study was to use the Delphi method to establish consensus among researchers and clinicians on the priorities for schema therapy research. The Delphi method (Jones & Hunter, 1995; Jorm, 2015) is a cost-effective way of establishing expert consensus on various topics and has been used previously to identify priorities in mental health research (e.g., Dewa et al., 2018; Hart & Wade, 2020; Owens et al., 2008; Saini et al., 2022). An advantage of this method is that it is decentralized, allowing for the recruitment of geographically dispersed participants from diverse backgrounds. The validity of the Delphi method is supported by the 'wisdom of crowds' literature that shows that groups can make good judgements, particularly when the panel includes a diverse range of experts and the members can make their decisions independently (Jorm, 2015). Unlike focus groups, the process allows panel members to communicate their perspectives without the discourse being dominated by certain individuals (Saini et al., 2022). The findings can contribute to clarifying the agenda for future research on schema therapy based on the integration of academic expertise and the perspective of clinicians. This can help optimize available resources, facilitate collaboration and provide critical insights into the most pressing gaps in the schema therapy evidence base.

6 | METHOD

6.1 | Design

Using the Delphi consensus method, a panel of experts independently rated the extent to which various areas are priorities for future

TABLE 3 Panel characteristics (N = 56)

Demographic	n (%)
Gender	
Female	43 (77%)
Male	13 (23%)
Age	
30–39 years	15 (27%)
40–49 years	16 (29%)
50–59 years	15 (27%)
60–69 years	6 (11%)
>70 years	4 (7%)
Country of residence	
Europe	23 (41%)
Australia	13 (23%)
United States America	7 (13%)
Canada	1 (2%)
United Kingdom	7 (13%)
South America	1 (2%)
South Africa	1 (2%)
Asia	3 (5%)
Accreditation status	
Advanced schema therapist, supervisor, trainer	25 (45%)
Advanced schema therapist	9 (16%)
Standard schema therapist	9 (16%)
Years of experience in schema therapy	
1–4 years	4 (7%)
5–9 years	15 (27%)
10–19 years	18 (32%)
20+years	6 (11%)
Professional role	
Psychologist	39 (70%)
Psychotherapist	4 (7%)
Clinical social worker	2 (4%)
Researcher	4 (7%)
Professor	6 (11%)
Medical Doctor	1 (2%)
Work setting	
Private practice	25 (45%)
Private practice and community health or psychiatric hospital	6 (11%)
Forensic	2 (4%)
Community mental health	2 (4%)
University	5 (9%)
University and private practice or other clinical work	16 (29%)
Client age group	
Children and/or adolescents only	1 (2%)
Both children and adults	8 (14%)
Adults only	34 (61%)

schema therapy research. The Delphi method involves (1) recruiting an expert panel; (2) compiling a list of statements that the panel rates for agreement; (3) collecting the panel's ratings of the items; (4) anonymous feedback to panel members regarding how their responses compare to the rest of the group; and (5) allowing panel members to revise their responses (Jorm, 2015). Responses converge across multiple survey rounds. This approach is common in clinical research to address questions that cannot be easily or ethically addressed using quantitative methods (Jorm, 2015).

6.2 | Participants

A panel was formed of (a) authors of three or more peer-reviewed journal articles on research relating to schema therapy (researchers) and (b) therapists and clinicians accredited by the International Society of Schema Therapy (ISST) as Standard or Advanced Schema Therapists. These criteria were to ensure substantive knowledge of schema therapy. A total of 56 experts participated, most of whom were certified Advanced Schema Therapists, Supervisors and Trainers, in Europe or Australia, with 5–19 years of experience (see Table 3).

6.3 | Procedure

Researchers were identified based on the corresponding authorship of articles included in a bibliometric analysis of the schema therapy literature (blinded for peer review, in press). Clinicians were approached via the ISST listserv and by asking professional groups and organizations associated with schema therapy to disseminate the study to their mailing lists and colleagues. Researchers and recruitment sources were emailed a study advertisement that included a hyperlink to the survey, hosted by Qualtrics. It was not possible to determine the response rate as we used a combination of emailing individuals, snowball sampling and mailing lists. The advertisement outlined the eligibility criteria and encouraged recipients to forward the information to colleagues. The participant information letter was provided on the first page of the survey. After reviewing the letter, respondents indicated consent by ticking 'Yes' in response to 'Do you consent to participating in this survey?'. Participants were asked to provide their contact details as this information was required to implement the survey over successive rounds. Panel members were asked to indicate whether they consented to being acknowledged in this journal article (see Acknowledgements section). The project was approved by the Australian Catholic University Human Research Ethics Committee (Project #: 2022-2552E).

The Round 1 items were developed by (1) interviewing the founder of schema therapy, Jeffrey Young; (2) conducting a 1-h focus group with the executive board of the ISST; and (3) collating the recommended directions for future research identified in systematic and scoping reviews on schema therapy, published within the last 5 years. The 1-h focus group involved six of the eight board members. A semi-structured approach was used for both the focus group and the interview with Jeffrey Young, using questions adapted from Saini

et al. (2022) and Owens et al. (2008): (a) What are your concerns about the schema therapy literature to date? Do you think there are any gaps in the schema therapy evidence base? (b) What topic areas relating to schema therapy do you think should be a priority for future research? Why? (c) What could schema therapy researchers do differently to improve the evidence base for schema therapy? (d) What directions would you like to see schema therapy research go in? The meetings were recorded and transcribed and the transcribed text was analysed to generate items to be rated in Round 1. A total of 11 systematic, meta-analytic or scoping reviews were also screened to identify recommendations for future research. We identified 81 items across these sources, which we organized into seven research themes: (1) Schema therapy constructs and measures, (2) Testing the theoretical assumptions underlying the schema therapy model, (3) Schema therapy effectiveness and mechanisms of change, (4) Schema therapy and theory in relation to different contexts and outcomes, (5) How schema therapy intersects with other theoretical models and therapeutic approaches, (6) Schema therapy training and certification and (7) Therapists' and patients' perspectives on schema therapy.

Panel members were asked to rate the extent to which each research area is a priority for future research using a five-point scale (1 = Very high priority, 2 = High priority, 3 = Medium priority, 4 = Low priority, 5 = Very low priority). The survey items were administered to panel members over three rounds. Items that did not establish a clear consensus in Round 1 (i.e., endorsed as 'Very high priority' or 'High priority' by 65%–74% of the panel) were re-rated in Round 2. Items that achieved ≤64% consensus were excluded from subsequent rounds. In line with conventions for Delphi consensus studies, we set the threshold of consensus at 75% and over (Diamond et al., 2014) and progressively reduced the time between the rounds for which panel members rated items as the survey length reduced. As part of the Round 1 survey, panel members were also invited to make additional suggestions for research priority areas that would be included in the Round 2 survey. The Round 2 questionnaire, therefore, consisted of (a) new items to be rated for the first time and (b) items that did not achieve clear consensus in Round 1 and needed to be re-rated. New items in Round 2 that did not establish a clear consensus were re-rated in the third and final rounds. Respondents were sent up to two email reminders for each round. Panel members who completed all items were invited to the subsequent round. Data were collected between 30 April 2022 and 15 June 2022.

Regarding reflexivity, the authors are therapists who work in clinical and academic settings. The lead author is a clinical psychologist and Advanced Schema Therapist, the second author is a clinical psychologist and Advanced Schema Therapist, Trainer and Supervisor and the third author is a relationship scientist accredited in Integrative Behavioural Couples Therapy. As members of the schema therapy community, the authors monitored their potential influence on research processes (e.g., recruitment, communication with participants and the interpretation of items suggested by the panel members). However, in comparison to traditional qualitative research, the Delphi consensus process is less vulnerable to problems with trustworthiness as the analysis is quantitative and based on pre-specified thresholds of consensus.

7 | RESULTS

7.1 | Round 1

In Round 1, 81 items were rated by 56 panel members. Of these, 18 achieved clear consensus (≥75%) as priorities for schema therapy research, whilst 45 items were excluded as they did not reach consensus (≤64%). The remaining 18 met the criteria to be re-rated in the Round 2 survey. Based on the suggestions made by panel members in Round 1, 41 new items were developed.

7.2 | Round 2

In Round 2, 49 panel members (attrition of seven panel members from Round 1) rated 59 items (41 new and 18 re-rated). Of these, one achieved adequate consensus as a priority for schema therapy research, 52 were excluded and six met the criteria to be re-rated in the third and final round.

7.3 | Round 3

In Round 3, 46 panel members (attrition of three panel members from Round 2) re-rated six items. None of these items achieved adequate consensus to be included as priority areas for schema therapy research.

7.4 | Final priority areas for schema therapy research

The Delphi consensus method identified 19 priority areas for schema therapy research. These are listed in Table 4, organized by research

TABLE 4 Schema therapy research areas that were rated as '*Very high priority*' or '*High priority*' by at least 75% of the expert panel

Research theme Item	Rated as '*Very high priority*' or '*High priority*'
(1) Schema therapy constructs and measures	
1. Clarifying the conceptual similarities and differences between early maladaptive schemas, coping styles, schema modes and attachment theory concepts (e.g., attachment styles)	79%
2. Core emotional needs	77%
(2) Testing the theoretical assumptions underlying schema therapy	
3. Using longitudinal data to examine the relationships between adverse childhood experiences and schema modes	80%
4. Moderators (e.g., temperament, the timing of adverse events, parent gender) of the relationship between adverse childhood experiences and schema modes	79%
5. Parenting styles and behaviours as predictors of early maladaptive schemas	79%
6. Using longitudinal data to examine the relationships between adverse childhood experiences and early maladaptive schemas	76%
7. Parenting styles and behaviours as predictors of schema modes	75%
(3) Schema therapy and theory in relation to different contexts and outcomes	
8. Schema therapy and theory in relation to interpersonal outcomes	86%
9. Schema therapy and theory in relation to parenting outcomes	77%
(4) Schema therapy effectiveness and mechanisms of change	
10. The effectiveness of schema therapy for complex trauma	89%
11. Identifying which processes or 'mechanisms of change' have the largest impact on treatment outcomes in schema therapy (e.g., limited reparenting, the working alliance, imagery, mode dialogues)	88%
12. The effectiveness of schema therapy for patients who have completed standard cognitive behaviour therapy (CBT) but remain unwell	86%
13. Multi-site randomized controlled trials to evaluate schema therapy	80%
14. Whether changes in early maladaptive schemas, schema modes and schema coping responses mediate schema therapy outcomes	77%
15. Randomized controlled trials with treatment as usual (TAU) to evaluate schema therapy	77%
16. The effectiveness of schema therapy for chronic depression and dysthymia	77%
17. Whether schema therapy modifies early maladaptive schemas, schema modes and schema coping responses	75%
18. Moderators of schema therapy outcomes, such as treatment length, baseline symptom severity, baseline schema score and therapist characteristics	75%
19. Imagery	75%

theme (see Online Supplement for a full list of items). Items from four of the seven research themes were identified as priority: (1) Schema therapy constructs and measures; (2) Testing the theoretical assumptions underlying schema therapy; (3) Schema therapy and theory in relation to different contexts and outcomes; and (4) Schema therapy effectiveness and mechanisms of change. Within the remaining three themes, no items were considered a priority by the panel. Therefore, integrating schema therapy with other models, schema therapy training and certification and therapists' and patients' perspectives on schema therapy were excluded as priority research themes.

As shown in Table 4, under the theme schema therapy constructs and measures, two areas of research priority were identified. The first is related to unpacking the conceptual similarities and differences between schema therapy concepts and attachment theory (Bowlby, 1979, 1982; Gillath et al., 2016; Mikulincer & Shaver, 2016) concepts. The second is related to further research on core emotional needs.

In terms of the second research theme, five areas were deemed to be high or very high priority. Three of these five priority areas emphasize the relationship between adverse childhood experiences (ACEs) and schema modes/EMSs. Two priorities mentioned the need for longitudinal data to inform an understanding of the relationships between ACEs and schema modes or EMSs, whilst the other priority was on the role of individual differences and contextual factors in moderating the association between ACEs and modes. The other two priority areas related to research on parenting, namely, investigating parenting styles as a predictor of EMSs and as a predictor of schema modes.

Concerning the third research theme—schema therapy and theory in relation to different contexts and outcomes—two research priorities were endorsed. Both priorities were on research focused on schema therapy and relational outcomes, namely, interpersonal outcomes and parenting outcomes.

The final research theme—schema therapy effectiveness and mechanisms for change consisted of the largest number of research priority areas (nine in total). Furthermore, four of these areas achieved panel consensus at levels over 85%. Three of these priority areas emphasized research on the effectiveness of the model for those who are either treatment resistant to cognitive behaviour therapy (CBT) or experience complex or chronic mental health issues related to trauma, depression or dysthymia. Two research priority areas focused on the conduct of RCTs for schema therapy. One of these areas was the conduct of RCTs in which comparison groups involve treatment as usual, whilst the other area emphasized the need for multi-site trials. Two areas focused on unpacking the moderators of schema therapy outcomes (such as treatment length, symptom severity and schemas scores at baseline) and mechanisms of change within the schema therapy model. One final area noted as a priority within the schema therapy effectiveness theme was research on imagery work.

8 | DISCUSSION

Using the Delphi consensus method, this study aimed to establish agreement on the priorities for future schema therapy research. Based on the ratings of a large international panel of academic and clinical experts in schema therapy, future research should prioritize four themes: (1) schema therapy constructs and measures, (2) testing the theoretical assumptions underlying schema therapy, (3) schema therapy and theory in relation to different contexts and outcomes and (4) schema therapy effectiveness and mechanisms of change. Research priority themes 1 and 2 emphasize testing the basic science of the schema therapy model (i.e., investigating the theoretical assumptions, constructs and measures of the schema therapy model). Research priority theme 3 emphasizes both basic and applied research in theory and therapy. Research priority theme 4 emphasizes evaluating the effectiveness of schema therapy. In the sections that follow, we discuss in detail the findings in terms of research priorities as they relate to the basic science of the schema therapy model and the effectiveness of schema therapy.

8.1 | The basic science of the schema therapy model

The panel ratings across research areas 1–3 identified a need for greater efforts to identify the critical intraindividual (e.g., temperament) and contextual factors (e.g., adversity) across the lifespan that heighten or mitigate the risk of developing EMSs and schema modes. Although many aspects of the schema therapy model are clinically intuitive, there exist several casual assumptions regarding the developmental origins of EMSs that are largely empirically untested. Specifically, causal assumptions inherent in the model entail that EMSs develop early in life as a function of the interplay between unmet emotional needs and the individual's temperament. However, research to date has not adequately addressed these assumptions, with most studies using correlational designs that typically assess the association between retrospective measures of childhood adversity and presently held maladaptive schemas in adult samples (Pilkington, Bishop, & Younan, 2021).

Research into the core emotional needs proposed by Young et al. (2003) was identified as a key priority by the panel when it comes to developing an empirical basis for the basic science of the schema therapy model. Young emphasized that the list of core emotional needs was derived from theory and clinical observation and thus required empirical investigation and refinements (Young et al., 2003). Two decades on, the discourse around the role of core emotional needs in the development of EMSs remains largely theoretical (e.g., Arntz et al., 2021). For example, (Arntz et al., 2021) proposed a 'reformulated' schema therapy model involving the addition of the need for self-coherence and the need for fairness, alongside the five core emotional needs theorized by Young et al. (2003). The reformulation was based on the views of an international working group and an

analysis of Dweck's theory of needs (Dweck, 2017). Although established theories such as Dweck's provide general support for Young's hypotheses that core needs are universal and that satisfying these needs is essential to psychological well-being, the small number of studies on core emotional needs have been correlational and few examine interactions with temperament. Establishing the empirical basis for the original core emotional needs espoused by Young should be prioritized. For example, future research could investigate the extent to which these needs align with the hypothesized EMS domains.

Following on from the emphasis placed on research on core emotional needs, the panel highlighted the need for greater work with an interpersonal emphasis. One such area of focus noted by the panel was parenting. Indeed, the topic of parenting emerged in nuanced ways across three research priority themes. Much of this emphasis was on how parenting styles may be predictive of the EMSs and modes that individuals exhibit in adulthood. To this end, we suggest that further integration of theories of human bonding, with a focus on parent–child relationships, could represent an important area of future research into the basic science of the model.

Indeed, the research panel noted that attachment theory (a lifespan theory of human bonding; Bowlby, 1979, 1982; Gillath et al., 2016; Mikulincer & Shaver, 2016) should be a focus of future research into schema therapy. Young et al. (2003) drew on attachment theory as a foundational pillar for the development of the schema therapy model. Research into schema therapy and attachment, therefore, corresponds with the theoretical foundations of the schema therapy model. For example, the assumption that close relationships with significant others play a critical role in the meeting of an individual's core emotional needs (e.g., secure attachment and safety and autonomy and competence) across the lifespan is consistent with attachment theory. However, there is little research into attachment concepts (i.e., attachment styles, attachment schemas and attachment needs) and how these relate to aspects of schema therapy (Karantzas et al., 2022). Attachment theory could thus provide an important conceptual framework to guide future research into the significance of close others in the development and maintenance of EMSs across the life span. Indeed, attachment theory has much to say about how the quality of caregiving experiences, in terms of the sensitivity and responsiveness of parents/caregivers, play an important role in the development of individual differences in people's cognitions and behaviours in relationships (Bowlby, 1982; Gillath et al., 2016; Mikulincer & Shaver, 2016).

The panel also emphasized the need for research into interpersonal outcomes in general. This may well be because interpersonal difficulties and problems are pervasive issues for those who experience chronic activation of EMSs (Janovsky et al., 2020). Interpersonal outcomes need not be limited to familial relationships. Rather, research into relationship science highlights the significant import of adult romantic and peer relationships to understanding how maladaptive cognitions guide behaviours and affective responses in close relationships and the implications these have for relationship satisfaction (Wilde & Dozois, 2019). For example, future

directions for strengthening the relational framework around the model could extend to work that relates to various types of relationships, such as relationships with romantic partners and close friends and the impact of such relationships across different stages of adulthood.

8.2 | The effectiveness of schema therapy

Some of the highest levels of consensus were reached in research areas relating to effectiveness, identifying mechanisms of change and examining moderators of schema therapy outcomes. The panel's responses indicated that priorities include comparisons between schema therapy and treatment as usual and trials conducted across multiple sites. This reflects that treatment as usual is preferable to waiting list controls (e.g., Furukawa et al., 2014), to establish the comparative efficacy of schema therapy versus standard clinical care, whilst collaborative studies across multiple sites can help address recruitment and funding issues (Taylor et al., 2017). Furthermore, there was an emphasis on establishing the effectiveness of schema therapy for treating complex trauma, chronic depression, dysthymia and those who were unresponsive to traditional CBT approaches. The priorities identified by the panel are consistent with the lack of research evaluating the effectiveness of schema therapy across various presentations. To our knowledge, fewer than 10 RCTs have evaluated the effectiveness of individual and/or group schema therapy. RCTs have been conducted with individuals with BPD (Arntz et al., 2022; Farrell et al., 2009; Giesen-Bloo et al., 2006; Leppänen et al., 2016), personality disorders (Bamelis et al., 2014), binge eating problems (McIntosh et al., 2016), depression (Carter et al., 2018; Porter et al., 2016) and criminal histories (Bernstein et al., 2021). Although the evidence regarding effectiveness based on RCTs is strongest for BPD, well-designed effectiveness studies across the areas outlined by the panel are needed to improve confidence in expanding the clinical application of the schema therapy model. This is especially important because the model is assumed to be transdiagnostic and is, in practice, applied across various presentations.

The panel highlighted that another priority relating to the effectiveness of schema therapy is an improved understanding of the specific aspects of the schema therapy model (e.g., limited reparenting, the working alliance, imagery and mode dialogues) that are mechanisms of change. Schema therapy is distinguished from psychodynamic-oriented therapy and CBT by its focus on limited reparenting and its use of experiential techniques, including imagery (Boterhoven De Haan & Lee, 2014). Indeed, imagery was highlighted by the panel as a priority for future research. Identifying which schema therapy processes have the largest impact on clinical outcomes can inform how schema therapy is delivered. Moreover, clarifying which practices enhance the effectiveness of schema therapy can determine which aspects of the model should be emphasized by therapists, trainees and supervisors, to foster the ongoing professional development and advancement of schema therapists.

8.3 | Strengths and limitations

This study has several strengths, including the recruitment of a well-sized, diverse and highly credentialed expert panel of 56 researchers and clinicians from both Western and non-Western countries. This was well above the 23 panel members required to achieve sufficiently stable and reliable results in Delphi consensus studies (Akins et al., 2005). The retention of participants over Rounds 2 and 3 were 88% and 82%, respectively, which exceeds the 70% retention rate recommended to ensure that attrition does not bias results (Jorm, 2015). Importantly, the panel members had considerable expertise: most clinicians were certified Advanced Schema Therapists, Supervisors and Trainers, and most researchers indicated that they were professors.

Nonetheless, experts from non-English speaking countries were under-represented. Furthermore, it was not possible to calculate the response rate, as we utilized mailing lists to recruit clinicians. The absence of consumer involvement (i.e., clients who have engaged in schema therapy) could be considered a limitation but was deemed appropriate as participation required an understanding of the empirical evidence base for schema therapy. Finally, the Delphi consensus process necessitates a balance between specificity and generality. We have identified the areas deemed to be priorities for schema therapy research. However, some areas refer to broad topics (e.g., parenting outcomes), and the specific research questions that warrant examination remain unformulated. It may be difficult to operationalize the specific studies or research questions needed to guide research moving forward based on the current findings. However, there is a trade-off inherent in the Delphi consensus methodology, whereby greater specificity (e.g., asking panel members to rate specific research questions rather than areas) can result in an unwieldy number of items to be rated. Therefore, the findings identify the broad areas from which researchers and clinicians can start to articulate precise research questions.

8.4 | Implications and recommendations for the field

In the following section, we provide some recommendations regarding how the schema therapy field could implement the current findings. The results of this Delphi consensus study identified the need for developmental and longitudinal research to inform the fidelity of schema therapy assumptions. We suggest that investment in large-scale cohort studies could allow for investigations into the temporal associations between ACEs and the formation of EMSs and schema modes. Given the considerable costs involved in collecting data from large samples over many years, researchers could consider leveraging existing cohort studies that have included parenting and related measures in early waves (e.g., the Longitudinal Study of Australian Children (Gray & Sanson, 2005; Nicholson et al., 2002) or the Avon Longitudinal Study of Parents and Children (Golding et al., 2001)) by

adding EMS measures to later waves. Given that Young proposed that temperament partly determines whether an individual develops EMSs, leveraging the Australian Temperament Project (Edwards et al., 2013; Prior et al., 1989) may be particularly beneficial. This longitudinal cohort study with a large representative sample of Australian children commenced in the early 1980s and has measured temperament, as well as parenting and relational variables, across infancy and early childhood, into adolescence and adulthood. Drawing on the differential susceptibility hypothesis, which similarly emphasizes the interaction between temperament and environmental influences on child outcomes (Belsky, 2005; Belsky & Pluess, 2009; Ellis et al., 2011), pursuing this avenue of research could provide important insights into the intraindividual and contextual factors that influence EMS formation.

The Delphi process has provided insights into the research areas deemed to be important to advancing and strengthening the evidence base for schema therapy. However, efforts to attend to these research priorities need to be considered in the context of recent efforts in the field to reformulate aspects of the schema therapy model originally formulated by Young et al. (2003). The findings of the current study highlight that there needs to be a balance between evaluating the foundational aspects of the model and investigating extensions and expansions. As a case in point, there are differing views on how to advance the mode model. To illustrate, Young initially described 10 modes, whilst Arntz et al. (2021) listed more than 40 and Edwards (2022) listed more than 80. As the model has expanded to address a wider range of presenting issues, more modes have been identified. Researchers have commented on the need for a parsimonious model, whilst identifying an adequate number of modes to adequately reflect the heterogeneity and idiosyncrasies in individual presentations (Lazarus et al., 2020). On the one hand, awareness of many different modes is argued to help clinicians obtain a more differentiated understanding of what is maintaining a client's problems and facilitate a flexible, client-centered approach to therapy (Edwards, 2022). However, as the number of modes increases, the ease with which clinicians can apply the model moment to moment in practice may decrease, potentially impacting both clinician uptake and treatment fidelity. Therefore, we suggest that before the development of new quantitative measures of schema modes, establishing the basic science of the original schema therapy model needs to be prioritized. This can provide a solid foundation for subsequent adaptations and extensions of the model.

Related to this is the need for a more concerted effort to conduct high-quality effective research across a range of presentations, including complex trauma and depression. Although the panel highlighted the need for RCTs, one of the challenges is the time and investment involved in completing trials of this nature. Given that schema therapy is a long-term treatment for clients with chronic and challenging presentations, long follow-up periods are required. We suggest that alternative study designs such as stepped-wedge trial designs (Brown & Lilford, 2006) could complement the evidence generated by traditional RCTs.

8.5 | Conclusion

Using the Delphi consensus method, an expert panel of clinicians and researchers have identified and agreed upon a research agenda that can significantly inform the direction of future research in the field of schema therapy. The findings highlight the need for considerable emphasis on developing an evidence base regarding the basic science of the schema therapy model. Furthermore, the findings also highlight the need for an emphasis on research aimed at evaluating the effectiveness of schema therapy across a range of clinical presentations and a greater understanding of the mechanisms of change. Efforts by the field to address these research priorities will provide important insights that can aid in advancing the status of schema therapy as an important transdiagnostic approach to addressing chronic mental illness.

CONFLICT OF INTEREST
None.

ETHICS APPROVAL STATEMENT
The project was approved by the Australian Catholic University Human Research Ethics Committee (Project #: 2022-2552E).

DATA AVAILABILITY STATEMENT
Participants of this study did not agree for their data to be shared publicly so supporting data is not available.

ORCID
Pamela D. Pilkington https://orcid.org/0000-0001-5852-3232
Gery C. Karantzas https://orcid.org/0000-0002-1503-2991

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Additional supporting information can be found online in the Supporting Information section at the end of this article.