


The responsiveness and clinical utility of the Australian therapy outcome measure for indigenous clients

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Funding information

Australian Catholic University Health Sciences Faculty provided a \$500 bursary to help cover project costs. No other grants were received.

Abstract

Introduction: The Australian Therapy Outcome Measure for Indigenous Clients (ATOMIC) is a goal-setting tool designed to measure therapy outcomes with First Australians. It was originally developed and validated for use with First Australian children as a culturally responsive alternative to traditional western outcome measures. This research explored the applicability, responsiveness and clinical utility of the ATOMIC when used with First Australian adults attending an urban health service.

Methods: Separate parallel studies investigated responsiveness and clinical utility. The first employed quantitative methods to investigate change over time via pre- and post-intervention data. The second employed a qualitative phenomenological approach to determine the clinical utility of the tool. Semi-structured interviews and focus groups were used, respectively, to understand the experience of using the ATOMIC from a client and clinician perspective. Client perspectives on the purpose of the tool and its alignment with their views on health care and therapists' perspective on the ease of use and applicability of the tool to the health service setting were explored. These data were analysed using reflexive thematic analysis.

Consumer and community consultation: The methodological approach followed National Health and Medical Research Council (NHMRC, 2018) guidelines in considering cultural continuity, reciprocity and equity. This project was initiated and guided by Aboriginal and Torres Strait Islander leaders (the advisory group) as a prioritised need for a robust way of reporting outcomes to complement existing statistical and narrative data within a large community-controlled health service. The advisory group provided high level governance from project conception to conclusion and were involved in yarn-backs about research findings.

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Results: Responsiveness: Wilcoxon test showed a statistically significant increase ($P = 0.00$) in ATOMIC scores pre- (mean = 1.8) and post- (mean = 8) intervention. Effect size (Cohen d) was deemed significant calculated at 2.1.

Clinical utility: Findings included: First Australian clients are adept at self-managing their conditions; the ATOMIC is a clinically useful outcome measure, which reflects this; ATOMIC is an acceptable tool to First Australian clients and clinicians and supports culturally responsive goal setting and occupational therapy practice.

PLAIN LANGUAGE SUMMARY

The Australian Therapy Outcome Measure for Indigenous Clients (ATOMIC) was created to measure how well therapy works for First Australian children. This research investigates whether it also works with adult First Australians.

Two studies were undertaken: a quantitative study to see whether ATOMIC scores changed before and after therapy and a qualitative study, which asked people what they thought about using the ATOMIC.

ATOMIC scores went up after therapy, indicating it is sensitive to change, and both clients and therapists liked using the ATOMIC and found it useful. It matched well with how First Australian adults see health care and helped set goals for therapy.

The results of the study show that the ATOMIC is helpful for both clients and therapists in understanding how well therapy works and helps to set goals that make sense culturally. This study looked at one health service in one regional area, so more research is needed to establish whether it works elsewhere. Overall, the results indicate the ATOMIC is a promising step towards better therapy for Indigenous Australians.

KEYWORDS

aboriginal, First Australian, indigenous, occupational therapy, outcome measure*

1 | INTRODUCTION

Fundamental to occupational therapy is a client-centred approach, which acknowledges the client and their family as central to therapy (Donnelly & Carswell, 2002). Cultural responsiveness is an important extension of client-centred care, requiring the practitioner to appreciate diversity, prioritise relationship building and reflect on their values, whilst responding appropriately to the unique attributes of people, families and communities (Indigenous Allied Health Australia [IAHA], 2019). This approach is vital when working with First Australians, with research consistently demonstrating culturally responsive health services, as determined by the client, achieve better overall outcomes (Thomas, 2015). Throughout this research article Aboriginal and Torres Strait Islander people are referred to as First Australians, in recognition of the original inhabitants of Australia and the Torres Strait Islands. As the research took place across many tribal nations and

Key Points for Occupational Therapy

- The ATOMIC is responsive to change across a wide range of skill domains.
- The ATOMIC is a dynamic, flexible, collaborative and client-centred outcome measure, acceptable to client and clinician.
- The ATOMIC has demonstrated clinical utility when utilised with Urban First Australians.

participants represented many different mob, there was no universally accepted term and First Australians was deemed an acceptable term by the advisory group and agreed upon by the research team.

Client-centred care also depends on goal setting and appropriately evaluating treatment outcomes (Stevens

et al., 2013). Individualised outcome measures are used to identify treatment aims, prioritise and monitor goals and measure goal achievement (Donnelly & Carswell, 2002). Evidence suggests the use of outcome measures in goal setting supports goal achievement and assists clinicians evaluate the effectiveness of therapy (Hurn et al., 2006).

Most commonly used outcome measurement tools have not been developed or validated for use with First Australians but instead use language and questioning styles consistent with Western approaches (Copley et al., 2021; Nelson et al., 2007). Similarly, the assumptions underpinning current evaluation methods are frequently incompatible with the occupation and participation focus that defines the values and practice of occupational therapy (Coster, 2008). Embedding First Australians' ways of knowing, being and doing into occupational therapy outcome measurement requires a relational, flexible, family-centred approach with collaborative goal-setting and informal yarn-based information gathering (Nelson et al., 2017; Stedman & Thomas, 2011; Watts & Carlson, 2002). Working collaboratively with the client, family members and the health-care team to support inter-professional goals has promoted client centeredness and a holistic perspective of the client and community (Hill et al., 2020). Acknowledging the heterogeneity of First Australians, it is also important to seek direction and expertise from experienced Aboriginal and Torres Strait Islander Elders and senior responsible people in families and communities at the local level to ensure that their worldviews are being included and integrated into practice (Bessarab, 2015).

1.1 | The ATOMIC

The ATOMIC was designed with, and overseen by, First Australians to facilitate culturally responsive outcome measurement, prioritising client-centredness and flexibility to respond to clients' individual needs and valued roles and responsibilities within family and community. It was originally designed for use with First Australian children as a goal-based outcome measure using a visual analogue scale (VAS) to monitor progress (Copley et al., 2021; Hill et al., 2020; Nelson & Allison, 2004) and can be used in both goal setting and evaluation.

The ATOMIC uses a dynamic, informal, yarn-based approach, which enables clients to express their goals in their own language and facilitates collaboration between therapist and client to support progress towards goal achievement (Nelson et al., 2022). Yarning is a reciprocal mode of communication, and an important way First Australians build relationships and authentic connectedness (Geia et al., 2013; Nelson et al., 2017). In a clinical

setting, yarning also enables health providers and clients to share common connections to build trust and enables the client to share their health story, which assists the health provider in understanding their context (Lin et al., 2016). Together, client and therapist can then collaborate to develop a shared plan for care including client goals (Lin et al., 2016). The ATOMIC enables a guided approach to formulating, documenting and reviewing these goals in a yarn-based way (Nelson et al., 2022). Previous research with paediatric clients indicates the ATOMIC is useful, reliable and responsive to change in this setting (Hill et al., 2020) but this is yet to be tested with First Australian adults.

In addition to being acceptable to the client, an outcome measure must also be responsive and clinically useful to be effective. Responsiveness refers to a measure's ability to detect change over time and is important in demonstrating the impact of interventions (Fawcett, 2007). Measuring outcomes is necessary for health-care services to demonstrate accountability to their clients (individuals and community), the Government and funding organisations; thus, understanding the responsiveness of the ATOMIC is an important part of determining its suitability as an outcome measure when working with First Australians' adult clients.

Clinical utility relates to overall usefulness of an assessment tool in a clinical situation when considering the cost, time, energy and effort required to administer the tool, as well as its portability, ease of use and acceptability to the client and clinician (Fawcett, 2007). Determining the tool's fit depends on the philosophy of the service and clinician (Fawcett, 2007), whether clients understand the tool, and for First Australians, whether they believe it to be considerate of their ways of knowing, being and doing (Martin & Mirraboopa, 2003).

The purpose of this study was to determine whether the ATOMIC is a responsive and clinically useful outcome measure for use with urban First Australian adults. Specifically, whether it is responsive to change over time pre- and post-intervention, and whether it is clinically useful and applicable in the eyes of clients and clinicians based on their experience with the tool.

2 | METHODOLOGY

2.1 | Ethics

Ethical clearance was obtained from the Australian Catholic University – Human Research Ethics Committee (ACU – HREC). Informed written consent was obtained from all participants, and participants were free to withdraw from the study at any time, without fear of any adverse

outcomes. The methodological approach followed National Health and Medical Research Council (NHMRC, 2018) guidelines for research with First Australians as described throughout the methods. In considering cultural continuity, reciprocity and equity, this project was initiated and guided by Aboriginal and Torres Strait Islander leaders (the advisory group) as a prioritised need for a robust way of reporting outcomes to complement existing statistical and narrative data within a large community-controlled health service. The advisory group provided advice from project conception to conclusion and were involved in yarn backs of research findings.

2.2 | Context of the research

Participants were recruited from an Aboriginal community-controlled health-care organisation, the Institute for Urban Indigenous Health (The IUIH). The service offers holistic, culturally responsive primary health care to First Australians living in an urban setting, including a comprehensive range of allied health services (Institute For Urban Indigenous Health, 2017). The 'Making Connections' Framework (Nelson et al., 2017) informs service delivery with a focus on connections with clients and colleagues and ongoing development of self-awareness and cultural integrity for all clinicians (Nelson et al., 2017). Occupational therapists use the ATOMIC as part of clinical practice to explore goals with clients and evaluate therapy outcomes. Clients of the adult service are aged 18 years and over and have a range of conditions, which impact their participation in daily life including musculoskeletal, metabolic, cognitive and mental health concerns.

2.3 | Research design

This research was conducted by undertaking two parallel studies. Responsivity of the ATOMIC to change over time was tested using pre- and post-intervention scores in goal achievement. Clinical utility was explored by interviewing clinicians and First Australian clients about their experiences using the ATOMIC specifically targeting (i) the perspective of the client in understanding the tool's purpose and whether it aligned with their views on health care; and (ii) the perspective of clinicians using the tool.

2.4 | Participant recruitment

Convenience sampling (Liamputtong & Ezzy, 2005) was used to recruit occupational therapy and client participants. Therapists who worked for the IUIH and were

experienced in using the ATOMIC were eligible to participate in the study. This included several First Australians therapists who were provided with capacity-strengthening opportunities as part of the larger research project. Client participants were recruited from those referred by the clinician they were working with. Eligibility criteria included being over the age of 18 years, having had two or more occupational therapy sessions using the ATOMIC and identifying as First Australian, as shown in Table 1. This recruitment approach reflected the importance of respectful relationships in the research where trust and openness were established. Responsibility was demonstrated in ensuring participants were provided with detailed written and verbal information including any potential benefits for their communities and before consent was obtained.

2.5 | Data collection measures

Clinical Responsiveness: Quantitative data were collected prospectively pre- and post-intervention using the ATOMIC as part of regular therapy with consenting participants. At baseline, the ATOMIC was used to identify goals important to the client and measures of the client's ability to complete each goal recorded on the VAS. Ratings were generated from the client, clinician or collaboratively as indicated in Figure 1. Documented goals informed ongoing therapy with the client and ATOMIC ratings were completed again at the end of intervention. To minimise response bias, baseline ratings were not visible to the client or clinician when completing post-ratings.

Qualitative Data: Two methods of qualitative data collection within a phenomenological framework (Giorgi, 1997) were used to explore clinical utility. Semi-structured, in-depth interviews were used to obtain client perspectives, and a focus group was used to capture

TABLE 1 Inclusion/exclusion criteria.

Inclusion criteria	Exclusion criteria
Clients <ul style="list-style-type: none"> • The IUIH clients • Consenting adults (over 18 years) • Have two or more occupational therapy sessions to facilitate pre-and posttest data collection • Identify as First Australian Therapists • Occupational therapists employed by the IUIH and have used the ATOMIC with adult clients 	Clients <ul style="list-style-type: none"> • Clients without decision-making capacity and no enduring power of attorney to provide informed consent • Clients without basic English language • Under 18 years of age

ATOMIC: Australian Therapy Outcome Measure for Indigenous Clients:

Name:		Therapist Name:	
Date of Birth:		Therapy Type: OT/SP <input type="checkbox"/> SP <input type="checkbox"/> OT <input checked="" type="checkbox"/>	
Aboriginal &/or Torres Strait Islander:		Date of baseline assessment <input checked="" type="checkbox"/> or outcome assessment: <input type="checkbox"/>	
Gender: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Number of sessions attended	
F <input type="checkbox"/> M <input type="checkbox"/>		of 5	

This form is for therapist use only and should be completed after sessions with children or with the client if adults/adolescents. Discussion should take place in a 'yarnin' style. Refer to information sheet before completing form.

This form should not be referred to when completing the outcome form. Skill, goal, measurement must be completed when filling out baseline form, for purposes of objectivity.

Skill / Domain	Goal	Evidence for Rating	Not Yet Achieved <input checked="" type="checkbox"/> Achieved <input checked="" type="checkbox"/>	Comments
Self-Care	To be able to independently open jars when cooking	Using pliers for opening jars or not opening them at all		

FIGURE 1 The Australian Therapy Outcome Measure for Indigenous Clients (ATOMIC) outcome measure.

clinician perspectives. The phenomenological approach is used to understand, describe and interpret the subjective meanings of real-life experiences (Giorgi, 1997).

2.5.1 | Semi-structured interviews

Semi-structured interviews were conducted with four client participants who agreed to follow-up interviews after undertaking ATOMIC ratings pre- and post-intervention. The purpose was to gain in-depth understanding of the client's perspective of the ATOMIC and whether it aligned with local First Australian ways of knowing, being and doing. Whilst an interview guide was used to ensure uniformity, interviews were conducted using a yarning approach in keeping with culturally responsive methods of data gathering with First Australians (Geia et al., 2013). The interview was conducted by an independent researcher but with the client's usual therapist present to foster connection and build trust. Participants were recruited across a large geographical area, and most had some significant health or mobility issues so to avoid additional costs or burden, interviews were conducted within the usual location of therapy (the client's home) at a time convenient to them.

2.5.2 | Focus group

A focus group with seven clinicians from the IUIH was undertaken to determine the clinical usefulness and applicability from the clinician perspective. One of these clinicians identified as First Australian. Questions were designed to elicit discussion about the ATOMIC's clinical utility, including its usefulness, acceptability and alignment with occupational therapy's 'ways of doing', within

the context of the IUIH. The focus group was co-facilitated by the first and second authors. Equal contributions were encouraged from all participants.

2.6 | Data analysis

Participants were given unique identifiers to track responses for analysis. To assist with analysis of the ATOMIC's responsiveness, VAS results from pre- and post-ATOMICs were converted using linear transformation to scores ranging from 0 to 10, with 0 representing no/lowest level of achievement and increments measured using a standard ruler to allocate a numerical value to VAS results. This transformation was conducted so the pre- and post-scores for each skill could be quantitatively analysed, as the ATOMIC contains a VAS line void of numbers (see Figure 1).

Data were cleaned, exported to an excel spreadsheet, then entered into Statistical Package for Social Sciences version 26 (SPSS Institute, Chicago, IL, USA) for analysis. As the data were not normally distributed according to the Kolmogorov-Smirnov test, the Wilcoxon test was used to determine the difference between pre- and post-ATOMIC scores. To identify agreement between the pre- and post-scores a standard alpha was set at 0.05, with *P*-values less than 0.05 considered to be statistically significant. Effect size (Cohen *d*) was also calculated to determine the size of the difference between pre- and post-scores and to provide further indication of responsiveness. The effect size is defined as the difference between mean baseline scores and follow-up scores, divided by the standard deviation of the baseline scores (Wright et al., 1998). Therefore, a measure with high variability of baseline mean scores in relation to change mean scores will result in small effect sizes.

2.6.1 | Clinical utility

Interviews and focus groups were audio recorded and transcribed verbatim. Transcripts were deidentified, and pseudonyms applied to ensure participant anonymity, whilst still allowing researchers to identify and track individuals' responses.

2.6.2 | Semi-structured interviews

To ensure a rigorous approach to data analysis, the first three interviews were independently reviewed by three authors. Each author completed Stages 1 and 2 of Braun and Clarke's process for analysing qualitative data (familiarisation of the data and generation of initial codes) (Braun & Clarke, 2006). The first three authors then met to discuss codes and organise data into emerging themes, and a consensus was negotiated (Stage 3). The fourth interview was coded by the first and second author using the previously agreed coding tree, with total agreement of codes between authors.

2.6.3 | Focus group

The focus group transcript was coded by three authors. The codes generated for the interview data were applied to the focus group as there was strong thematic overlap, with several new codes added. Upon completion of the focus group coding, the authors met, and findings were synthesised to identify key themes emerging across data sets. Key themes were then agreed upon (Stage 4), with further theme refinement taking place prior to analysis (Stage 5). The lead author then completed the final analysis and write-up of the data (Stage 6).

2.7 | Enhancing rigour

2.7.1 | Positionality statement

In keeping with reflexivity in the research process (Berger, 2015), the researchers acknowledge their positionality as White western occupational therapists, although two researchers have a combined 30-year history working with First Australians. Researchers participated in socialisation activities at the IUIH to gain an understanding of Aboriginal terms of reference and how they applied to local research. This preparation was vital to acknowledge and critically reflect on the assumptions and perspectives we brought to the research and alignment with the IUIH ways of seeing

and knowing. Research findings were discussed with the Indigenous research advisory group at the IUIH and feedback incorporated throughout the data collection, analysis and translation processes. Two of the researchers worked at the IUIH, and one reported to the CEO and worked with the cultural integrity lead (both part of the advisory group). This enabled regular formal and informal discussions of findings and Aboriginal oversight of the research project. Having multiple investigators in the team from diverse working backgrounds helped to foster dialogue, and the robust conversations, which took place in research meetings, helped to enrich the research process. In addition, the voice of First Australian clients in the research also prompted the research team to reflect on their interpretation of data and helped to highlight 'taken for granted' assumptions, which added greater rigour to the analysis (Liamputtong, 2008).

Transcripts were sent to focus group participants for member checking to ensure accuracy prior to analysis (Padgett, 1998), and clinician participants were also presented with thematic analysis results. Clinicians agreed themes had been reliably interpreted. Interview participants declined the opportunity to review transcripts. Peer debriefing (Padgett, 1998) during regular supervision sessions was undertaken to ensure that analysis and interpretation of interview data was reliable, and that coding decisions were consistent with their meaning.

To ensure the study could be reliably reproduced, an audit trail (Padgett, 1998) was used to document coding decisions, including definitions of codes emerging from data analysis. All codes were discussed by the research team and recorded for later review and analysis.

3 | RESULTS

3.1 | Responsiveness

Thirty-four First Australian clients agreed to have their pre-/post-ATOMIC data analysed. Nil participants were lost to follow up with all participants providing pre- and post- measures. The participants were made up of 24 women and 10 men, aged 32 to 80 years. Seventy-seven goals were identified over nine skills domains (falls prevention, mobility, community access, shower safety, self-care, oedema management, IADLs, pain management, continence). A Wilcoxon test showed statistically significant increase ($P = 0.00$) in ATOMIC scores pre- and post-intervention. ATOMIC ratings pre-intervention had an average of 1.82 (SD = 1.84), and post-intervention scores had an average of 8.00 (SD = 2.49), as can be seen in figure 2. The Cohen

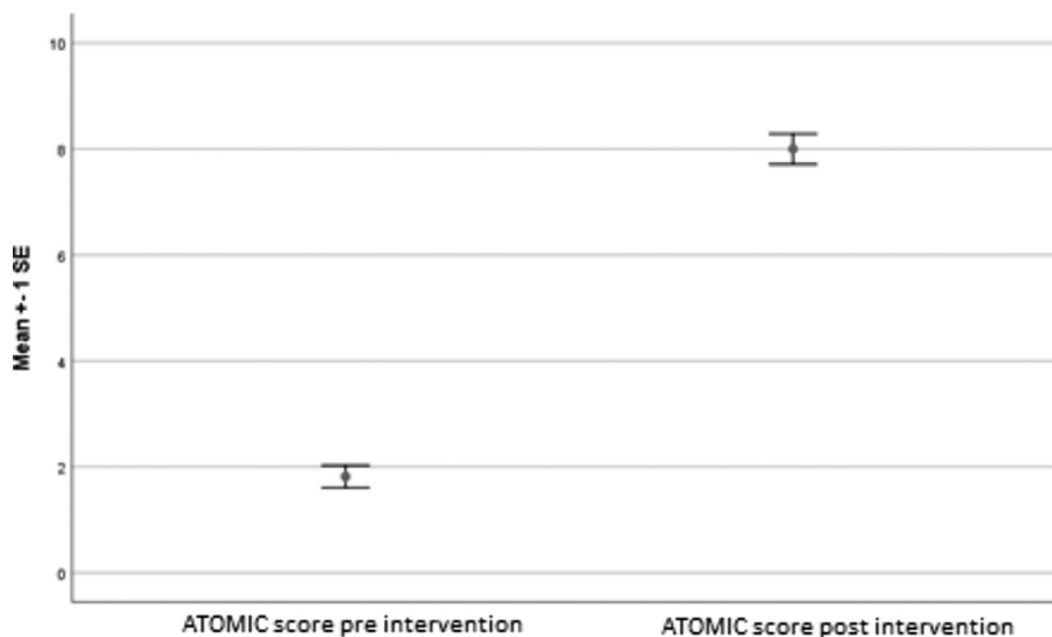


FIGURE 2 Mean Australian Therapy Outcome Measure for Indigenous Clients (ATOMIC) scores pre- and-post-intervention.

effect size calculation (d) was large at 2.1. The larger the effect size, the more responsive the test is to clinical change, with figures over 0.8 considered to be large (Wright et al., 1998).

These results indicate the ATOMIC is responsive to change and can measure the effect of intervention over time.

3.2 | Clinical utility

The ATOMIC was found to be flexible, dynamic and responsive to clients' needs. Synthesis of interview and focus group data resulted in four overarching themes. These were (i) First Australians are on their own journey and are adept at self-managing their conditions; (ii) The ATOMIC is a clinically useful outcome measure, which is acceptable to First Australian clients and clinicians; (iii) the ATOMIC supports culturally responsive goal setting; and (iv) the ATOMIC supports occupational therapy practice. Results are illustrated with quotations taken from the transcripts of the interviews and focus group.

3.2.1 | Clients are self-managing their conditions

This theme was strongly reflected in client interviews. Client interviews were conducted by yarning, and due to the conversational nature of the process, there were few

concise quotes conveying meaning in a single instant. Thus, to preserve the integrity of interview data, this theme will be discussed primarily through narrative.

Data obtained suggested clients were on their own journey and adept at self-managing their conditions, noting 'that's the way I keep track of it' (IV 4). The clinician formed just a small role in the process. Clients conveyed a strong sense of pride and independence (*I feel as though you have seen that I'm pretty safe*) (IV 1), were motivated to optimise their functioning and independently sought ways to obtain and maintain gains. Clients confidently and consistently identified their key issues and proactively sought solutions, often engaging in therapy having already trialled several management approaches. For example, one client noted, *I go to the gym and he gives me a list of exercises to do. Some I know I can do easily enough and manage to do them and do them hard, and others I know I've got no hope of doing* (IV 2). These individuals also identified what they would like from therapy and worked collaboratively with therapists to optimise outcomes despite not formally identifying 'goals'.

3.2.2 | The ATOMIC—A clinically useful outcome measure

Clients and clinicians generally suggested the ATOMIC was flexible, easy to understand, useful for gathering information and formalising goals. For instance, one client identified 'that might [be] interesting for me ... I'm applying for a disability pension pretty soon; I'm seeing

some specialists and that sort of thing. So yeah, maybe the more information the better for me' (IV3).

Clinicians acknowledged that the ATOMIC could be adapted to suit clients, based on their specific needs, and aligned with their ways of practicing, for instance, 'even if you don't have the form, you can improvise. It's really flexible to the therapist and client' (FG2).

The clinicians felt the ATOMIC could be used in a dynamic fashion, allowing it to be integrated into therapy when it was most appropriate. The ATOMIC's ability to be used in a dynamic and flexible manner increased its acceptability to both client and clinician 'because it takes away the pressure of the client feeling like they are being assessed' (FG5).

Therapists felt this differed from other outcome measures, which they felt to be too prescriptive.

'I feel like ATOMIC is easier to use with First Australians compared to other outcome measures, like the COPM takes a long time to fill in, and it's really structured like some of the other outcome measures that are available'.

(FG1)

The adaptability of the tool for rating clients was identified as a strength by both clients and clinicians. Clinicians described various methods they used to capture goal ratings, including the client or clinician marking the line, or the clinician asking the client for a verbal rating out of 10, which could be later transcribed onto the form. Clinicians noted that both means were effective and allowed them to obtain scores in a way that best suited each client. Clinicians felt asking their clients to rate themselves out of 10 was useful, due to the familiarity of this approach in other health contexts:

'People maybe relate to that numbering system because they might get "what's your pain out of 10?" ... that they get from doctors...they relate to that because they've heard that question before'.

(FG7)

One client's comments reflected the clinicians' views, noting 'Yeah before it was pretty difficult, it was down there (draws x near 1 on line), and after, it's way back up here now (draws x near 10)' (IV3).

Some participants preferred the VAS to numbers, because it was perceived as 'less scary to have a line with nothing on it and the client can sort of make it their own in their head, instead of being like, that's a 5 or a 4' (FG2). The ATOMIC VAS was also viewed by therapists as a way of quickly and easily showing clients how they

had progressed, noting 'you can show clients how far they have come, and some clients really value that' (FG1). Most clients agreed, noting that having a visual record of improvement was useful 'I think for my own records and things like that, so I can look back' (IV3).

Clinician feedback regarding the ATOMIC's clinical utility was overwhelmingly positive with regard to portability, acceptability and ease of use, including that if ATOMIC form was unavailable, they could improvise and 'just draw a scale on a piece of paper' (FG3). Some issues were identified, particularly extra time demands associated with documentation. Clinicians noted it was time consuming to fill out the form when information needed to be duplicated when 'the information is in our [medical record] notes and we have to write that out again on a bit of paper' (FG7).

Clinicians strongly supported the creation of an electronic version of the form, which would contain all relevant information from an instance of therapy.

3.2.3 | The ATOMIC supports culturally responsive goal setting

Clients and clinicians felt the ATOMIC was a client-centred, collaborative goal-setting tool. One client described this process, noting,

'I started paying attention to when I was, hanging out the washing, then I'm like geez my shoulder really does pain when I do that and I had to keep dropping my arm down and giving it a rest and come back to it. So, I just had to suggest a few things to [my OT] ... so we just kind of just met halfway, I did some of my own research'.

(IV 3)

Further, the ATOMIC supported an informal yarning style of information gathering and goal setting, which enabled greater emphasis on developing the relationship between clients and clinicians.

'I guess it's an opportunity to have a goal that is considered less formal, because it is not a very strict rating scale, it can be moulded to the client as it suits them, whereas so many of the OT assessments and things are standardised to a population that is not our population ... we can have the freedom to go out and have a yarn with the client and take a bit of paper and get them to mark it'.

(FG2)

Clinicians felt yarning was extremely important, helping to build connections and facilitating a stronger therapeutic relationship with clients. The clinicians agreed the goal-setting process of the ATOMIC was facilitated by the yarn and that it was an excellent way to move the conversation towards goal setting in a culturally responsive manner.

I think that ATOMIC complements it, it's not a hindrance on the yarn which is really important ... I feel like it does not obstruct the flow of the yarn, whereas some of those other ones like COPM or GAS really get in the way of the conversation.

(FG3)

The importance of yarning was also noted by clients. They felt as though the most important aspect of therapy for them was getting the opportunity to have a yarn, 'just talking about it is enough, putting ideas in my head. I'll take in what'll work.' (IV2). Additionally, the ATOMIC was clearer and easier to understand when it was incorporated as part of a yarn:

'when I look at the form it's easy to see that I've improved on the line. I like being able to sit here and have a yarn with you about it. It makes more sense when you explain it to me'.

(IV4)

3.2.4 | The ATOMIC supports occupational therapy practice

Clinicians felt the ATOMIC was useful not only for defining and prioritising goals with their clients but also for tracking and communicating progress. Clinicians additionally suggested the tool aligned with core therapeutic values and helped to demonstrate accountability. Some clinicians also felt that the ATOMIC helped to promote inter-professional practice and communication through documentation.

Clinicians expressed that the process of documenting client goals with the ATOMIC facilitated clarification around client priorities;

'it seems to open up communication between myself and the client, and that they were aware of what I was focusing on, and that I could be really sure that what I was focusing on was their biggest priority as well'.

(FG3)

Clients also spoke positively about the ATOMIC for its utility in making their goals more tangible, expressing satisfaction with its ability to track their progress, with one client saying, 'did I really say I was a 2 and now I'm an 8, that's a really big improvement' (IV2). Multiple clinicians also reported the ATOMIC was useful in demonstrating progress to their clients;

'when we go back and do a review or follow up, you can show clients how far they have come ... some clients really value that ...'.

(FG1)

Clinicians felt ATOMIC facilitated documentation, making the 'language that we use in our notes more clear and concise So, it does make it more transparent' (FG3). This also enhanced professional reflection and helped to guide clinical decision-making, planning and directing the next steps with a client;

'it's good as a clinician to reflect and see what has worked and if a client's progress has not changed that significantly, then you need to kind of rethink what is going on, and maybe think about referring to other professions. It can be used as part of evaluating your service'.

(FG1)

Some clinicians also valued the tool's utility in demonstrating service accountability to the community.

'as a service it does keep us accountable ... and it does show that we are achieving outcomes with our clients and we are making changes'.

(FG1)

Clinicians suggested the ATOMIC supported inter-professional practice by clarifying their role and aims of therapy to other professionals 'because often OT is not super well understood ... that makes it a little clearer that we do have goals and they are important for the client' (FG2). The clients also felt that having the form available for review by the multidisciplinary team was positive and facilitated open communication, so time could be spent on therapy rather than reiterating past episodes of care:

'they've got to look everything up on the computer and then you've got to give them another run down and refresh their memory,

but I think this is a good method so that it's there for everyone to see and everyone can be on the same page'.

(IV3)

3.3 | DISCUSSION

Findings from this study indicated that the ATOMIC is a responsive and clinically useful tool with urban First Australian adults. This supports earlier findings of the ATOMIC's use with First Australian children (Hill et al., 2020). Importantly, the ATOMIC was viewed by clients and clinicians as a culturally responsive tool, which prioritised individuals as autonomous and active agents in their own health-care journey, a key to decolonised occupational therapy practice (Ryall et al., 2021).

This study demonstrated the ATOMIC is responsive to measuring change in clients' goal achievement over time. The ability to detect change is vital for an outcome measure to be considered effective (Fawcett, 2007). Given the diverse nature of client needs and interventions offered by occupational therapists, it is also important that an outcome measure's responsivity be assessed in a suitably heterogenous sample. In this study, responsivity was calculated across nine different skill domains, with the resulting effect size considered very large. That the ATOMIC was found to be highly responsive to change across varied skill domains reflective of real practice supports it as a useful outcome measure.

As a core component of clinical utility, this study considered the acceptability of the ATOMIC to client and clinician (Fawcett, 2007). One of the key themes to emerge from this research was that the ATOMIC supports culturally responsive goal setting enabling individuals to be actively engaged in collaborative and inclusive decision-making at the centre of their care, in the context of family, community and culture (IAHA, 2019). Embedding ATOMIC within the community-controlled health system also enabled an environment, which supports culturally responsive care (IAHA, 2019).

Previous research suggests that to be considered culturally responsive in First Australian populations, a tool must be flexible, dynamic and client-centred (Watts & Carlson, 2002). Flexibility refers to the tool's ability to be utilised in a manner adaptable to the individual and their unique needs, whilst a dynamic assessment approach facilitates more naturalistic, informal and client-centred interactions, which promote relationship building (Gould, 2008; Lidz & Peña, 1996). In addition, similar to previous research in a rehabilitation setting, the use of yarning contributed to the collaborative nature of therapy and upheld client agency, which is critical in the context

of Aboriginal health (Ciccone et al., 2019). This study highlights both ATOMIC's flexibility and dynamic approach, increasing the tool's acceptability to clients and clinicians, who agreed the use of ATOMIC facilitated a collaborative and more culturally responsive interaction.

Further, this study found that the ATOMIC enabled therapists to use a strengths-based approach to determine outcomes using respectful, collaborative yarns, which enhanced the quality of information obtained (Ryall et al., 2021). Results were also consistent with previous findings, which suggested the ATOMIC supports inter-professional practice, further establishing it as a culturally responsive tool with research suggesting that collaborative inter-professional practice better addresses the needs of vulnerable populations (Copley et al., 2021; Paul & Peterson, 2009).

This study highlighted the ATOMIC's alignment to a yarning style of communication. Yarning is integral to the appropriate use of the ATOMIC, as it encourages clinicians to reorient their information gathering process with their clients, ensuring a more holistic perspective of the client. The ATOMIC assists therapists to understand the health condition from the client's worldview, ensuring a more culturally responsive approach to care (Nelson et al., 2017; Ryall et al., 2021). Yarning has important implications for the ATOMIC's clinical utility, particularly from a training perspective. Data support that the tool is simple and easy to understand; however, it is essential that it be delivered by clinicians with an appropriate understanding of culturally responsive care. To use the ATOMIC in a culturally responsive manner it is vital clinicians are supported to develop skills in yarning (Dwamena et al., 2012).

Like previous studies, time constraints were a potential barrier to the successful administration of the ATOMIC (Copley et al., 2021). Clinicians stated their therapy sessions lasted 1 h. Consultation times in other services are generally much shorter (Lin et al., 2016) raising concerns that time may be inadequate to capture the detailed history obtained through yarning. To be clinically useful across other therapy settings, the ATOMIC's administration time may need to be reduced, with systems, which can support this (e.g., shared electronic health records). Supporting clinicians in the yarning method improves proficiency, and it is accepted that yarning time is shorter when there is an established connection (Dwamena et al., 2012).

Other aspects of the ATOMIC's clinical utility were also well-supported during the study. The ATOMIC is highly portable increasing the likelihood it will be used in practice (Fawcett, 2007). It can be utilised without the physical form, in person, or over the phone and in any location where therapy may take

place. There is no cost associated with the tool, and its administration does not require any equipment all of which add to its overall usefulness and clinical utility (Fawcett, 2007).

3.4 | LIMITATIONS

Small interview sample size is a potential study limitation. Further research with larger sample sizes may generate new perspectives. Additionally, all participants resided in a large urban centre; thus, perspectives are potentially limited in variability with regard to demographic presentation. Given the cultural diversity of the First Australian population, it is recommended further exploration be undertaken across Australia to determine if this study's findings are transferable.

3.5 | IMPLICATIONS FOR PRACTICE AND FUTURE RESEARCH

This study has demonstrated the ATOMIC to be a culturally responsive and clinically useful outcome measure capable of measuring change over time when applied to urban First Australian adults. The qualitative data support the use of the ATOMIC as a dynamic, flexible, collaborative and client-centred outcome measure, acceptable to clients and clinicians. Whilst this study explored the perceptions of client and clinicians in an urban setting, it is unclear whether these results are transferrable throughout Australia. In accordance with the need for culturally sensitive, evidence-based clinical measures for First Australians, further research is needed regarding validation of the ATOMIC and its utility with other health disciplines. The ATOMIC is a culturally responsive goal achievement tool that enhances inter-professional service delivery for First Australians.

AUTHOR CONTRIBUTIONS

Nick Sheahan contributed to study design, data collection, data analysis, interpretation of results and draft manuscript preparation. Alison Nelson contributed to study conception, study design, data analysis, interpretation of results and draft manuscript preparation. Rosamund Harrington and Loretta Sheppard contributed to study design, data analysis, interpretation of results and draft manuscript preparation. Rebekah White and Renee Brown contributed to study conceptualization. Ashley Potgieter and Amy Bartlett contributed to data collection. All authors reviewed the results and approved the final transcript.

ACKNOWLEDGEMENTS

The authors acknowledge the many Goori Tribal Nations whose territories we work across within South-East Queensland. We honour the legacy and the vision of those who paved the way and those who continue to guide us. We honour our future generations by maintaining the vision with focused determination.

The authors also acknowledge the wisdom, insights and guidance provided by the advisory board and the UIH institute, their clients and occupational therapists who generously participated in the research, offering their time, insight and expertise. Open access publishing facilitated by Australian Catholic University, as part of the Wiley - Australian Catholic University agreement via the Council of Australian University Librarians.

CONFLICT OF INTEREST STATEMENT

We wish to draw the attention of the editor to the following facts, which may be considered as potential conflicts of interest. The nature of potential conflict of interest is described below. One author was involved in the design of the ATOMIC but was not involved in any data collection process. We wish to confirm that there are no other known conflicts of interest associated with this publication, and there has been no significant financial support for this work that could have influenced its outcome.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

We further confirm that any aspect of the work covered in this manuscript that has involved human patients has been conducted with the ethical approval of all relevant bodies and that such approvals are acknowledged within the manuscript.

Written consent to publish potentially identifying information, such as details or the case and photographs, was obtained from the patient(s) or their legal guardian(s).

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How to cite this article: Sheahan, N., Harrington, R., Nelson, A., Sheppard, L., Potgieter, A., Bartlett, A., White, R., & Brown, R. (2025). The responsiveness and clinical utility of the Australian therapy outcome measure for indigenous clients. *Australian Occupational Therapy Journal*, 72(2), e13001. <https://doi.org/10.1111/1440-1630.13001>