

# BMJ Open Measuring emotional well-being through subjective report: a scoping review of reviews

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**To cite:** Koslouski JB, Wilson-Mendenhall CD, Parsafar P, *et al.* Measuring emotional well-being through subjective report: a scoping review of reviews. *BMJ Open* 2022;**12**:e062120. doi:10.1136/bmjopen-2022-062120

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2022-062120>).

Received 18 February 2022  
Accepted 14 December 2022

## ABSTRACT

**Objective** This scoping review of reviews aims to describe the current landscape of measures of emotional well-being (EWB).

**Methods** Following established practices for scoping reviews, we searched the PsycInfo, ERIC, Scopus and PubMed databases in June and July 2021 for reviews of measures of EWB that described their review methods and psychometric properties of included measures. From each eligible article, two coders independently extracted the authors' (1) definition of EWB, (2) purpose for the review, (3) methods (eg, search terms, inclusion and exclusion criteria), (4) identified measures (including any noted adaptations) and (5) the scope of psychometric information presented. Descriptive and content analyses were used to examine data.

**Results** Forty-nine reviews were included in this scoping review. Reviews included anywhere between 1 and 34 measures of EWB and 135 unique EWB measures were captured across all reviews. We found that there was no consistent definition of EWB, identified measures varied widely and reviews were published in a range of disciplines. Psychometric evidence varied as did authors' purposes for conducting the reviews.

**Conclusions** Overall, these reviews suggest that literature on EWB measurement is disjointed and diffuse. Conceptual integration and harmonisation of measures is needed to advance knowledge of EWB and its measurement.

**Trial registration numbers** 10.17605/OSF.IO/BQDS7 and 10.17605/OSF.IO/WV8PF.

Well-being is multidimensional, with reference to a broad range of indicators deemed important to population health. *Emotional well-being (EWB)* is recognised as one of those dimensions. High levels of EWB have been associated with physical health, healthy ageing and longevity.<sup>1–5</sup> Given global reports of low scores on well-being indicators such as quality of life, social integration and life satisfaction, EWB has been elevated as a recommended public health target within a nation's priorities in the service of advancing well-being.<sup>6</sup> Consistent with this priority, there has been a proliferation of theories, constructs and measures in the EWB domain.

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ All stages of the review process (ie, title and abstract screening, full-text review, extraction, measure inclusion and exclusion) were completed using independent double coding; consensus was reached on all decisions.
- ⇒ Our study captured reviews across several disciplines. This demonstrates not only widespread interest in emotional well-being (EWB), but also disparate conversations occurring across fields.
- ⇒ Our study is limited in that we did not conduct a critical appraisal of the included articles or measures.
- ⇒ Articles and measures' varied definitions of EWB complicated precise identification of measures of EWB.

Many conceptualisations of the EWB exist, with variations based on researchers' training or particular areas of interest. EWB research is conducted across many disciplines, each of which has its own history of terminology. As such, the current landscape of EWB research is diverse, leaving challenges in communication and dissemination, which makes it difficult to target EWB as a public health priority.

Efforts of researchers to establish a working definition of EWB acknowledge that EWB comprises how positive an individual feels generally and about life overall.<sup>7</sup> This working definition embraces both experiential and reflective features, and reflects focus on the positive continuum as distinguished from features of distress and dysfunction. The working definition further articulates the importance of acknowledging interpretation within the context of culture, life circumstances, resources and life course. For example, the salience of various facets of EWB may vary across cultures or across the lifespan.<sup>7</sup> In collectivist cultures or those with a strong emphasis on family, social features (eg, the health and well-being of loved ones) may greatly influence how an individual feels generally and about life overall.<sup>8</sup> Those in



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more individualistic cultures may be more influenced by personal preferences. Similarly, the reflective features (eg, life satisfaction, sense of meaning) described in this definition may be less salient for young children or those with cognitive impairments (eg, dementia, intellectual disabilities). For these populations, the experiential features characterised in this working definition may be more pertinent.

Measurement represents one important path to elevating the importance of EWB in overall population health. That is, understanding what comprises the EWB construct and how EWB measured is critical to driving policy and programme decisions to enhance EWB. Work on EWB as a whole, however, is fairly recent and thus plagued by limited consensus as to how EWB should be measured. Subjective, neuroimaging and psychophysiological approaches have been explored, yet to date, subjective reports dominate the literature given factors such as ease with which data can be gathered and historical emphasis.<sup>9</sup> Subjective report refers to an individual's evaluation of a construct of interest. The constructs of interest could be as simple as a single item global evaluation of quality of life or may be multiple items designed to tap separate aspects of EWB. The target of evaluation could be the self or other, such as a parent completing a scale regarding their child's affect. The name subjective report implies a leaning toward subjectivity versus objectivity in measurement, which has been discussed as potentially appropriate given that the values placed on different life circumstances are evaluated by individuals in different ways.<sup>9</sup> As an example, one individual may place greater personal value on family whereas another may value independence, and thus, their subjective evaluation about quality of life may be influenced by these values.<sup>10</sup> In addition, the period of retrospection may vary across subjective reports, such as asking a respondent to report on how one feels right now versus over the past week generally. Shorter periods of retrospection have been described as potentially lending greater objectivity to the evaluations.<sup>9 10</sup> Overall, the focus of EWB subjective measurement research has been more heavily directed toward reflective (ie, evaluative) than experiential (ie, hedonic) features.<sup>11</sup> Yet growing interest in understanding the unique and overlapping contributions of both reflective and experiential features, coupled with the confusing, broad landscape of EWB terminology, supports the need for systematic evaluation as to what reviews of EWB subjective measures are available, and what information has structured and been captured in those reviews.

The purpose of this paper was to conduct a scoping review of existing reviews of EWB subjective report measures. Conceptual and methodological clarity for conducting scoping reviews has emerged over the past two decades.<sup>12–15</sup> As described by Colquhoun and colleagues, a scoping review is 'a form of knowledge synthesis that addresses an exploratory research question aimed at mapping key concepts, types of evidence and gaps in

research related to a defined area or field by systematically searching, selecting and synthesizing existing knowledge' (Colquhoun *et al*, pp. 1292–1294).<sup>14</sup>

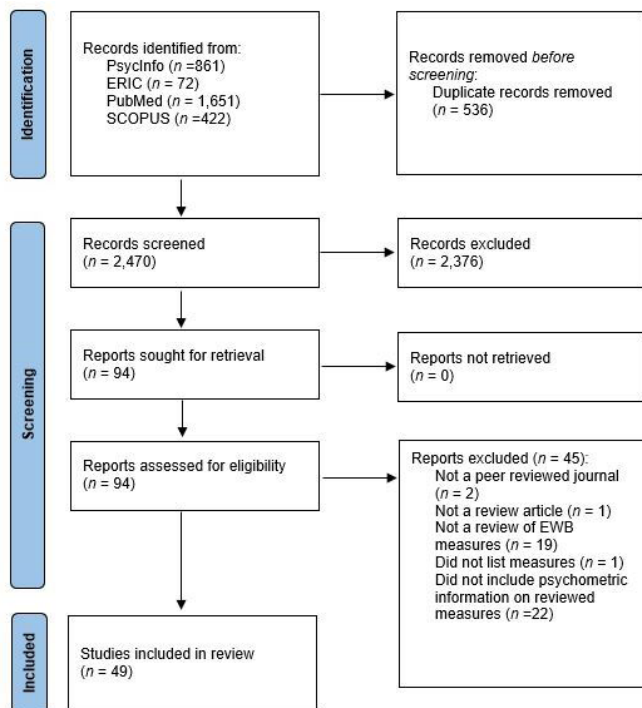
Aligned with these goals, our scoping review aims to serve multiple purposes that offer implications to advance the science and communication of EWB. First, we aim to shed light on the extant of EWB measurement landscape by identifying and documenting which subjective EWB measures exist and in what disciplines they have been developed and used. Second, we aim to catalogue information on existing definitions of EWB that can spur advances in consensus of what EWB is and is not. For this purpose, we identify how EWB was defined in each review. Third, we aim to identify the scope of psychometric information presented in reviews as well as the reported adaptations of included measures. Finally, we aim to advance development of new EWB measures by sharing what commonalities and differences are present in the methods that have been used to conduct past reviews of EWB measures, such as decisions surrounding eligibility criteria, to potentially shed light on the reason for variation in measures.

## METHODS

Following scoping review methods outlined by Peters and colleagues,<sup>15</sup> we conducted a scoping review to identify and map existing reviews of measures of EWB. Our four aims organise a rigorous and transparent methodological approach to knowledge synthesis focused on mapping current concepts, types of evidence and gaps in research. We preregistered our study through the Open Science Framework (two registrations made, with the second registration for additional search terms; see Abstract section). Deviations have been recorded with OSF and include minor revision of the second and third research questions in response to information available in included reviews.

### Information sources and search strategy

After consulting with a research librarian, the team searched the PsycInfo, ERIC, Scopus and PubMed databases on 10 June 2021 and 1 July 2021. A main purpose of this scoping review was to identify and document the range of EWB conceptualisations across literatures. Thus, as recommended when completing a scoping review,<sup>13</sup> we used a broad range of search terms related to EWB to capture as many potentially relevant articles as we could. Described later, we then applied strict inclusion and exclusion criteria to narrow in on articles of interest. To identify *reviews of measures*, we also included search terms related to measurement and literature reviews, resulting in search terms related to (a) EWB, (b) measurement and (c) literature reviews. Specifically, the four databases were searched for (a) ("emotional well-being" OR "emotional wellbeing" OR "psychological well-being" OR "psychological wellbeing" OR "subjective well-being" OR "subjective wellbeing" OR "life satisfaction" OR "happiness" or "happy" OR "positive emotion\*" OR "flourish\*"



**Figure 1** Preferred Reporting Items for Systematic Review and Meta-Analysis diagram. EWB, emotional well-being.

OR “eudaimoni\*” OR “evaluative well-being” OR “evaluative wellbeing” OR “hedonic well-being” OR “hedonic wellbeing” OR “experiential well-being” OR “experiential wellbeing” OR “Spiritual well-being” OR “spiritual wellbeing” OR “positive affect” OR “meaning in life” OR “wellbeing” OR “well-being” OR “well being” OR “optimism” OR “thriving” OR “resilience” OR “restorative” OR “social emotional” OR “socioemotional”) AND (b) (“measure\*” OR “assessment\*” OR “self-report” OR “self-report” OR “rating\*” OR “scale\*” OR “questionnaire” OR “survey” OR “instrument”) AND (c) (“valid\*” OR “development” OR “psychometric” OR “evaluation” OR “reliab\*”).

With regards to searching for literature reviews, search terms and limits varied slightly in the four databases. In ERIC and Scopus, we added “systematic review” OR “meta-analysis” OR “metaanalysis” to our search terms. In PsycInfo, we used the Methodology limiter and limited the results to articles that were a systematic review, meta-analysis or meta-synthesis. Finally, the PubMed search was completed using a hedge developed by the Canadian Journal of Health Technologies<sup>16</sup> for this purpose. A hedge is a designed set of search text used to refine searches; hedges are designed by expert searchers and are validated and sensitive. All searches were limited to articles published in 2000 or later. Once duplicates were removed, the combined searches yielded 2470 articles. Our Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) diagram is shown in figure 1 and identifies the number of articles included and excluded at each stage of our review.

## Selection process

### Article inclusion and exclusion criteria

Articles were included if they were (1) reviews focused on the measurement of a construct conceptually linked to EWB; (2) used a structured or systematic search strategy; and (3) included at least some information on the validity or psychometrics of the reviewed measures. In addition, articles were limited to those published in peer-reviewed journals, published in English and published in the year 2000 or later. As long as the full-text article was available in English, articles originating in any nation were included. No limits were placed on the population (eg, age or clinical/non-clinical population) reported in reviews. Exclusion criteria included: (1) book chapters; (2) book reviews, case studies, qualitative studies; (3) unavailable full texts or abstract-only papers; (4) articles published in dissertations, theses, conference papers or opinion/perspective papers and (5) articles only focused on health-related quality of life (HRQOL). We excluded grey literature because we were interested in literature with high credibility and high outlet control<sup>17</sup> (ie, the extent to which content is produced using explicit and transparent knowledge creation criteria) as this is most likely the knowledge informing EWB research.

We conceptualise EWB as a construct that can be measured in general populations and not only those experiencing health conditions or specific life events. We consulted with subject matter experts, who included diverse members of six networks funded by the U.S. National Institutes of Health (NIH) to advance research on EWB, NIH programme staff and external advisory board members of individual networks. Experts had clinical and academic training. Two structured response sessions were held; our team presented the variety of terms we were encountering in the literature and solicited feedback from experts on their conceptual links to EWB. Experts discussed the relevance and history of these terms and made recommendations about their conceptual links to EWB. Based on the outcomes of these discussions, we deemed reviews of *well-being*, *emotional well-being*, *mental well-being*, *psychological well-being*, *mental health and well-being*, *quality of life*, *wellness*, *life satisfaction*, *psychosocial health*, *child mental health* and *community health and well-being* to be ‘conceptually linked’ to EWB. Here forth, we refer to this collective body of work as ‘EWB.’

HRQOL measures are used to ‘measure and summarise the health of populations’ (Fryback *et al*, p. 3).<sup>18</sup> Researchers have identified the importance of measuring EWB independent of health because there is evidence that when physical health improves, EWB does not always do the same, and may even deteriorate.<sup>19</sup> Thus, consistent with advice from the subject matter experts with whom we consulted, we excluded reviews only focused on HRQOL measures from our study as they are used to measure and summarise overall health. We did not limit our review to systematic reviews as this may have been overly restrictive but required that authors presented some type



of structured search strategy to ensure that they were completing a review of measures.

### Measure inclusion and exclusion criteria

Within articles, measures were included if they measured a construct conceptually linked to EWB (eg, life satisfaction, quality of life). We located original measures and reviewed the domain(s) measured and individual items. We excluded measures that were focused on HRQOL, disease-specific populations, health outcomes, psychopathology or only contained negatively valenced items because these are beyond the scope of our definition of EWB. Measures only developed in languages other than English were included if they met our inclusion criteria.

### Screening process

Using Covidence software,<sup>20</sup> the title and abstract of each of the articles were independently screened by two trained coders. Coders received 2 hours of structured training and practice from the first author at each stage of the review as well as ongoing supervision and check-ins. Coding discrepancies were reviewed by the first author for a final decision; borderline cases were reviewed by both the first and last authors and consensus was reached for all decisions. As a result of this process, 94 articles were retained for full-text screening. Next, the full text of each article was independently reviewed by two trained coders. Again, any discrepancies were resolved by the first author or the first and last authors. Forty-five studies were excluded at this stage (reasons outlined in [figure 1](#)). In some cases, articles stated that they were looking at 'generic QOL' measures (as opposed to or in tandem with 'disease-specific QOL' measures). On closer inspection 'generic QOL' measures were often HRQOL measures intended to be used with *any* disease population rather than a *specific* disease population. In these cases, the reviews were excluded because they focused on HRQOL measures (sometimes along with disease-specific measures).<sup>21 22</sup> Two articles indicated that tables of psychometric information were available on request; we did not receive responses to our requests for these tables and therefore excluded the articles for their lack of inclusion of psychometric information. Forty-nine articles were retained for inclusion in this review.

### Data collection

Using Covidence software, two coders independently extracted data from the included articles. From each article, we extracted the authors' (1) definitions used to characterise EWB, (2) purpose for the review, (3) methods (ie, search strategy, search terms, inclusion and exclusion criteria, extraction strategy, analysis plan), (4) identified measures (number identified in review, names and authors of each, any noted adaptations), (5) the scope of psychometric information presented (any systematic strategy for extracting and coding psychometrics, presence of table or narrative to describe psychometrics, and level of detail in presented information (global summary, detailed psychometrics, global summary with

a few examples)), (6) table titles and headings used to present psychometric information (eg, internal consistency, construct validity) and (7) review authors' conclusions about the state of EWB measurement. In addition, citations for the 49 articles were collected to assess the disciplinary focus of the journals publishing the included reviews.

### Data analysis

#### Research question 1: what reviews on EWB subjective report measures exist?

To answer research question 1, we counted the number of reviews, the number of measures within each review and the total number of measures captured across reviews. In addition, using the citations of each article, we used the Web of Science Master Journal List<sup>23</sup> to capture the disciplinary focus of each journal. When journals were indexed in both the Web of Science Social Sciences Citation Index (SSCI) and Science Citation Index Expanded, we used the journal category(ies) identified in the SSCI. Three journals (ie, Innovations in Clinical Neuroscience, Reviews in Clinical Gerontology and Folia Medica) were not indexed by the Web of Science; in these cases, the first and last authors reviewed the aims and scope of each journal to identify corresponding Web of Science categories. Lastly, we used conventional content analysis<sup>24</sup> to code for authors' (1) purpose in conducting the review and (2) conclusions about EWB measurement.

#### Research question 2: how is EWB defined in existing reviews of EWB measures?

To answer research question 2, we used directed content analysis<sup>24</sup> to code authors' approach to defining EWB or related constructs. First, the extraction of the authors' purpose for conducting the review was used to determine if a goal of the review was to examine definitions or conceptualisations of EWB. If examining definitions was not a review goal, extraction of the EWB definition content from the article was coded as either providing a single definition, presenting multiple definitions or not specifying a definition. For articles in the single definition category, we also coded whether the definition provided was the World Health Organization's (WHO) definition of quality of life<sup>25</sup> because this definition was consistently observed across articles.

#### Research question 3: what is the scope of validation information and adaptations in existing reviews of EWB measures?

To answer research question 3, we assessed the number of studies that provided psychometric evidence in a table, the narrative or both; the level of detail of this evidence (ie, global summaries, detailed psychometrics or global summaries with a few examples). We also consolidated any reported adaptation by measure (rather than study) to summarise the reported adaptations.

**Research question 4: what commonalities and differences are present in the methods used to conduct existing reviews of EWB measures?**

To answer research question 4, we used conventional content analysis<sup>24</sup> to code for authors' (1) search and review processes, (2) inclusion and exclusion criteria and (3) analysis procedures. Deductive codes were used for established review practices (eg, PRISMA review, COnsensus-based Standards for the selection of health status Measurement INstruments [COSMIN] checklist,<sup>26</sup> independent two coder review) while inductive codes were used to capture the full breadth of authors' search and analysis processes and inclusion and exclusion criteria.

### Patient and public involvement

There was no patient or public involvement in any aspect of this study or its write-up.

## RESULTS

### What reviews of EWB measures exist

We located 49 review articles of EWB measures. These review articles contained between 1 and 34 EWB measures ( $M=5.27$ ,  $SD=6.10$ ). A total of 135 measures of EWB were captured across the review articles (see online supplemental appendix A for complete list). The Satisfaction with Life Scale<sup>27</sup> (included in 14 articles) and World Health Organization Quality of Life-Brief Version (WHOQOL-BREF;<sup>28</sup> included in 13 articles) were the most commonly reported measures.

Authors' purposes for conducting their reviews varied widely. Only 20.4% ( $n=10$ ) of the 49 articles were broad reviews of instruments that did not focus on a specific population. Close to half ( $n=22$ ; 44.9%) of the articles looked for measures that could be used with a specific health population (eg, diabetes, dementia, intellectual disabilities). Approximately one-third ( $n=17$ ; 34.7%) of the articles focused on a specific developmental period (ie, children, adolescents or older people). A smaller number of articles concentrated on one specific instrument ( $n=5$ ), caregivers ( $n=3$ ) or a specific cultural population ( $n=2$ ).

Two phenomena were observed in the included reviews of EWB measures. First, 35 reviews (71.4%) also included measures developed for specific disease populations (eg, diabetics) or HRQOL measures, making their review broader than only measures of EWB. In addition, 12 of the 49 articles (24.5%) included measures of depression, anxiety or other forms of psychopathology to assess well-being or QOL (ie, suggesting that well-being is indicated by the absence of psychopathology). As indicated in our Methods section, these measures were excluded from our counts of EWB measures but are noted in describing the current landscape of reviews of EWB measures.

The 49 articles were published in journals that represent a range of disciplines, including psychology ( $n=11$ ), health policy and services ( $n=6$ ) and clinical neurology

**Table 1** Disciplinary focus of journals publishing included reviews ( $n=49$ )

Journal discipline	# of reviews	Percent of included reviews published in this discipline
Psychology	11	22.45
Health policy and services	6	12.24
Clinical neurology	5	10.20
Gerontology	5	10.20
Nursing	5	10.20
Psychiatry	5	10.20
Public, environmental and occupational health	5	10.20
Rehabilitation	5	10.20
Economics	3	6.12
Interdisciplinary social sciences	3	6.12
Multidisciplinary sciences	2	4.08
Paediatrics	2	4.08
Sociology	2	4.08
Special education	2	4.08
Criminology and penology	1	2.04
Endocrinology and metabolism	1	2.04
Family studies	1	2.04
Gastroenterology and hepatology	1	2.04
Healthcare sciences and services	1	2.04
Oncology	1	2.04
Respiratory system	1	2.04
Social sciences, biomedical	1	2.04
Substance abuse	1	2.04
Urology and nephrology	1	2.04

Note. Because the Web of Science sometimes indexes journals in multiple disciplines, totals sum to more than 49 reviews and 100%.

( $n=5$ ). The disciplinary foci of journals publishing these articles are shown in table 1. We found that 35% of these reviews have been published since 2017, suggesting a surge in interest in the topic.

In a majority of the articles ( $n=43$ ; 87.8%), the authors concluded that further development and refinement of EWB measures is needed. In addition, in nearly one-fourth of the articles ( $n=12$ ; 24.5%), the authors concluded that there were inadequate or not yet sufficiently studied and validated measures available for specific patient

populations. Across reviews, authors also noted the variation in psychometric testing that has been conducted on various measures, with few measures being endorsed as psychometrically sound.

### How EWB is defined within included reviews

Authors rarely used the term EWB. Fifteen (30.6%) of the 49 articles focused on mental well-being, psychosocial well-being, subjective well-being and well-being; general mental health and well-being or wellness. Twenty-five (51.0%) of the reviews focused on QOL and three (6.1%) focused on life satisfaction. The remaining six articles (12.2%) focused on behavioural and psychosocial functioning, patient reported outcomes measures, person-centred measures or positive psychology measures.

The definitions used to characterise EWB also varied across the reviews. Consistent with the lack of consensus in the field, one in five reviews (20%) specified that examining definitions was a goal of the review and another 6% presented multiple definitions that were relevant to measurement. Approximately half of the reviews provided a single definition (49%) and these definitions varied considerably. The WHO quality of life definition was cited most frequently, in 14% of the reviews. The WHO defines quality of life as ‘an individual’s perception of their position in life in the context of culture and value systems in which they live and in relation to their goals, expectations, standards and concerns’ (Power *et al.*, p. 1570).<sup>25</sup> The varied definitions that were extracted from the other reviews are provided in online supplemental materials. These definitions were often multidimensional and spanned various conceptualisations of well-being, from those involving life satisfaction and affective tendencies to those encompassing self-actualisation and purpose in life. Moreover, the varied definitions were instructive with regard to measurement in different populations. For example, Newton *et al.*<sup>29</sup> indicate that the social and emotional well-being of Indigenous Australians ‘not only takes into account individual functioning but also its connection to the land, culture, ancestry, spirituality, family and community and considers factors such as the collective impact of experiences such as child removals, incarceration, family breakdown, cultural dislocation, racism and social disadvantage.’ (p. 41). The remaining 25% of the reviews did not provide any definition, which tended to occur in reviews narrowly focused on a particular measure or psychometric goal.

### Scope of psychometric information provided

Based on our inclusion criteria, all included articles provided some psychometric information about included measures. However, the level of detail in these psychometrics varied. The vast majority (98.0%; n=48) of the 49 articles provided psychometric evidence in the narrative of their article. The narratives most commonly presented global summaries (ie, synthesising results across studies; n=22; 44.9%) or global summaries with a few examples (n=15; 30.6%). Fewer than one in five articles (n=9; 18.4%)

included detailed psychometrics in their narrative. The remaining articles (n=2) either listed the types of psychometric testing completed, but provided no summary, or summarised psychometric testing across measures rather than indicating what had been completed for individual measures.

In addition, 87.8% (n=43) of articles provided psychometric evidence in one or more tables. These tables most frequently presented global summaries (n=18; 36.7%) or detailed psychometrics (n=15; 30.6%). Less commonly, tables included global summaries with a few examples (n=6; 12.2%) or listed types of psychometric evidence without summarising any results of that testing (n=3; 6.1%). In one case, the article’s table indicated whether reliability and validity evidence (grouped together) were ‘preliminary’ or ‘satisfactory’.

Forty of the 49 articles (81.7%) provided psychometric evidence in both the narrative and at least one table. Four articles provided detailed psychometrics in both their table(s) and narrative. Online supplemental appendix B includes the psychometric properties reported in each article as well as the level of detail reported in authors’ narratives and tables.

A little under half (n=23; 46.9%) of the 49 articles reported adaptations to one or more of their included EWB measures. Adaptations were most commonly an abbreviated scale (ie, fewer items), language and/or cultural adaptations or adaptations for a different population or developmental period (ie, adolescence). At least five EWB measures (ie, Control, Autonomy, Self-Realisation, Pleasure; Ryff Scales of Psychological Well-being; Satisfaction with Life Scale; McGill Quality of Life Questionnaire; WHOQOL-BREF) are each available in more than 10 languages.

### Authors’ review methods

The strength and level of detail describing authors’ review methods varied across articles. Approximately one-quarter (n=12; 24.5%) of studies reported following PRISMA guidelines. Less formalised language included ‘structured’, ‘comprehensive’ or ‘integrative’ literature searches. Every article (n=49; 100.0%) reported search terms, all but two studies (n=47; 95.9%) reported the databases that they searched, and all but one (n=48; 98.0%) reported inclusion criteria. Inclusion criteria varied across articles. Authors limited their searches to measures and populations that were consistent with the purpose of their review. Approximately one-third (n=17; 34.7%) limited their searches to peer-reviewed articles, and language criteria ranged from English-only articles to no language restrictions. More than half of the articles (n=27; 55.1%) required the presence of psychometric evidence. The same number of articles (n=27; 55.1%) specified using an independent double coding system, either for their full search results or for a percentage of articles (eg, 20%) with disagreements resolved through discussion or consultation with a third researcher. Authors less commonly reported their extraction methods. Finally,



although few articles presented a systematic method for gathering psychometric evidence (n=4; 8.2%), a greater number of articles (n=30; 61.2%) reported a systematic method of evaluating psychometric evidence. Of these, two-thirds reported using an established system of evaluating psychometric evidence (ie, COSMIN checklist, which was used in seven articles) with the remaining 10 articles using a system developed in-house. In addition to extracting psychometric evidence, some authors also extracted sample characteristics, measure length and suitability for specific populations (eg, individuals with intellectual disabilities). Finally, a small number of articles (n=5; 10.2%) also presented qualitative analysis of the domains included on various instruments or theories informing item generation.

## DISCUSSION

This scoping review aimed to describe the current landscape of reviews of EWB measures. Following a scoping review process,<sup>15</sup> we identified 49 reviews containing 135 unique EWB measures. Within these reviews, we found there was no consistent definition of EWB, identified measures varied widely and reviews were published in a range of disciplines. Authors commonly focused on measures for specific populations (eg, individuals with a specific disease) and reviews rarely included measures intended to be used across the life course. The scope of reviews often extended beyond EWB, most commonly including disease-specific or HRQOL measures. Reviews varied in the level of psychometric detail provided as well as the rigour of review methods. Overall, we found the literature to be quite diffuse and in need of harmonisation across definitions and measures.

To our knowledge, this is the first scoping review of EWB measurement reviews. Scoping reviews are often used in rapidly emerging fields,<sup>12</sup> and the substantial number of reviews and measures included in this review demonstrates the value of a scoping review to describe the landscape of this field. Our findings on the varying definitions used to characterise EWB are consistent with prior reviews,<sup>30–32</sup> but represent a much wider scope. Instead of focusing on definitions at the level of specific measures, our study examined the conceptual framework that guided each review, and thus reflected how researchers across different disciplines approach EWB measurement. Our findings suggest investigation is needed to tease apart the extent to which different terms are being applied to the same constructs (eg, EWB) and alternatively, the same terms are being applied to different constructs.<sup>33</sup>

Challenges in defining EWB pose major obstacles to advancing the science of EWB, such as limiting comparison of findings across studies or adequate screening and assessment of EWB in applied settings. An interdisciplinary working definition of EWB, such as the one proposed by Park and colleagues,<sup>7</sup> is likely to advance a more cohesive approach to EWB measurement. If this definition takes hold, important next steps to advance

EWB measurement will be to identify if and how current measures align with this definition. Subsequently, measure refinement, harmonisation and comprehensive validation will be needed.<sup>9–11</sup> The number of measures identified in this scoping review suggests that harmonisation, rather than additional proliferation, of measures is likely needed. Supporting this work, our scoping review provides a list of 135 EWB measures. We have used this list to create a free, online repository of EWB measures.<sup>34</sup> Considering the findings of this review, when selecting measures for research or applied purposes, users should carefully consider how EWB is being conceptualised.

Along with the contributions of our study, several limitations should be noted. Despite our comprehensive search strategy for peer reviewed literature, examining grey literature may have generated additional insights about the landscape of EWB literature. Although we reported the psychometric properties and level of detail that each review presented, we did not complete our own independent evaluation of measures as it was beyond the scope of this study. Future research is needed to rigorously evaluate the quality of psychometric evidence available for existing EWB measures. Although we observed rigorous psychometric evaluation being conducted in some instances (eg, COSMIN checklist),<sup>26 35 36</sup> these reviews focused on specific populations and therefore did not provide information about the psychometric adequacy of EWB measures for general populations. We also did not address intended use of each instrument (eg, screening, progress monitoring). However, our results indicated that less than half of the included reviews reported measures' sensitivity to change, which suggests a possible gap in psychometric evidence on the use of these tools for progress monitoring and assessing change due to an intervention. Despite identifying 135 measures, it was also beyond the scope of this study to identify the degree to which each of these measures or adaptations have been used. Future research could investigate the use of these measures in research and applied settings. Finally, our study was limited by the inconsistency in EWB definitions across the literature; this made it challenging to arrive at definitive statements about EWB and its measurement. We even observed instances where a measure had not been definitively named by its author<sup>37</sup> and was subsequently given various names by review authors.<sup>31 38</sup>

The results of our scoping review point to several important directions for future research. Our review points to the importance of disentangling the overlap and distinctions between HRQOL and QOL measurement. As also noted by Kaplan and Hays,<sup>39</sup> authors' application of these terms varies and contributes to challenges in identifying and applying measures, as well as comparing results across studies. Our review also suggests the importance of considering the process by which a broad definition of EWB is operationalised in measurement with different populations and in various contexts, such as considering cultural context and stages of lifespan development. For example, we observed reviews focused specifically on



older adults, but questions remain regarding whether EWB is qualitatively different between younger and older adults and how it should be measured in each group. In addition, research is needed to determine if adapting adult measures for children and adolescents is an appropriate practice. Presently, the sensitivity of EWB measures and understanding of EWB trajectories in the development for child populations is unknown.<sup>40</sup> The time scale of subjective measurement is also an important consideration in such research, as traditional questionnaire formats reviewed here are increasingly being adapted for ecological momentary assessment during daily life.<sup>41 42</sup> We observed interest in EWB measurement across many disciplines that, with shared language and conceptualisations, hold the potential to rapidly advance our understanding of EWB.

In conclusion, our scoping review found that the literature on EWB measurement is disjointed and diffuse. Disciplines use varied definitions and measures of EWB, which impedes the comparison of results across studies or the application of existing measures in new settings or studies. Unified language and shared conceptualisations are essential for research findings to be synthesised, generalised and disseminated for application.<sup>33</sup> Therefore, conceptual integration and harmonisation of measures is needed to advance knowledge of EWB and its measurement.

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**Acknowledgements** We acknowledge the work was initiated as part of the cross-network project meetings funded under RFA-AT-20-003, specifically under the Subjective Measurement subgroup. Thus, we acknowledge the contributions of cross-network participants in those discussions.

**Contributors** All authors listed have made an intellectual contribution to the work and approved it for publication. JBK led data collection, analysis, writing and revisions of the manuscript. JBK is also responsible for the overall content as the guarantor. CDW-M led analysis and writing for research question two and contributed to revisions. PP contributed to the conceptualisation, writing of the introduction and revisions. SG contributed to the conceptualisation, methods for the study and revisions of the manuscript. MYM contributed to conceptualisation and revisions of the manuscript. SMC served as senior author of the study, leading conceptualisation of the study and contributing to data collection, analysis, writing and revision of the manuscript.

**Funding** This work was supported by the National Center For Complementary and Integrative Health of the National Institutes of Health Award Numbers U24AT011281, U24AT011289 and U24AT011310. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health, Eunice Kennedy Shriver National Institute of Child Health and Human Development or the US Department of Health and Human Services. The work of the fourth author was also supported by the National Center

for Complementary and Integrative Health Award Number K23AT010879 and the Hope for Depression Research Foundation Defeating Depression Award.

**Competing interests** CDW-M has served as a consultant to the non-profit organisation Healthy Minds Innovations.

**Patient and public involvement** Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

**Patient consent for publication** Not applicable.

**Ethics approval** Not applicable.

**Provenance and peer review** Not commissioned; externally peer reviewed.

**Data availability statement** Data are available upon reasonable request.

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