



PEARL

## Measuring the purpose in life in the adult population

Arunjit, Somrudee; Balthip, Karnsunaphat; Latour, Jos M.

**Published in:**

Belitung Nursing Journal

**DOI:**

[10.33546/BNJ.3176](https://doi.org/10.33546/BNJ.3176)

**Publication date:**

2024

**Link:**

[Link to publication in PEARL](#)

**Citation for published version (APA):**

Arunjit, S., Balthip, K., & Latour, J. M. (2024). Measuring the purpose in life in the adult population: A scoping review. *Belitung Nursing Journal*, *10*(2), 126-133.  
<https://doi.org/10.33546/BNJ.3176>

All content in PEARL is protected by copyright law. Author manuscripts are made available in accordance with publisher policies. Wherever possible please cite the published version using the details provided on the item record or document. In the absence of an open licence (e.g. Creative Commons), permissions for further reuse of content should be sought from the publisher or author.

## **Measuring the Purpose in Life in the Adult Population: A Scoping Review**

### **Somrudee Arunjit**

Ph.D. student; Faculty of Nursing, Prince of Songkla University; Songkhla, Thailand.

Email: [somrudee@bcnnakhon.ac.th](mailto:somrudee@bcnnakhon.ac.th)

### **Karnsunaphat Balthip**

Associate Professor; Faculty of Nursing, Prince of Songkla University; Songkhla, Thailand

Email: [qbalthip@gmail.com](mailto:qbalthip@gmail.com)

### **Jos M. Latour**

Professor in Clinical Nursing; Faculty of Health, University of Plymouth; Plymouth, United Kingdom

Email: [jos.latour@plymouth.ac.uk](mailto:jos.latour@plymouth.ac.uk)

**Journal Title: Belitung Nursing Journal**

**Acceptance date: 11 March 2024**

### **Corresponding author:**

Somrudee Arunjit

Faculty of Nursing, Prince of Songkla University, Songkhla, Thailand

Email: [somrudee@bcnnakhon.ac.th](mailto:somrudee@bcnnakhon.ac.th) Phone: +66 0979393905

**Funding:** Not applicable

**Acknowledgments:** The author would like to sincerely thank Associate Professor Kittikorn Nilmanat, Associate Professor Praneed Songwathana, and Assistant Professor Sarana Suwanruangsri of the Faculty of Nursing, Prince of Songkla University, Thailand, for their valuable advice.

**Declaration of Interest:** The authors declare no conflict of interest.

**Author's Contributions:** The authors [S.A and K.B] have contributed substantially to the conception, design of the work, and acquisition. All authors [S.A, K.B, J.M.L] contributed to the analysis and interpretation of data. The first author [S.A] drafted the work. The second and third authors [K.B and J.M.L] reviewed it critically for important intellectual content. All authors [S.A, K.B, J.M.L] approved the final version to be published. All authors [S.A, K.B, J.M.L] agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

**Author's Biographies:**

Somrudee Arunjit, RN, MScN. <https://orcid.org/0009-0008-8933-116X>

Associate Professor Karnsunaphat Balthip, RN, MScN, Ph.D. <https://orcid.org/0000-0001-5491-202X>

Professor Jos M. Latour, RN, MScN, Ph.D. <https://orcid.org/0000-0002-8087-6461>

**Data availability statement:** All data generated or analyzed during this study are included in this published article (and its supplementary information files).

**Declaration of Generative AI and AI-assisted technologies:** The authors declare that no AI-assisted technologies have been used during the preparation of this work.

**Ethical consideration:** Not applicable because this is a review.

**Statement to pay APC:** The authors agree to pay the APC within 10 days of the editorial acceptance.

## **Measuring the Purpose in Life in the Adult Population: A Scoping Review**

### **ABSTRACT**

**Background:** The purpose in life can be a motivation factor for individual persons to realize that life is essential to existence for well-being. Adult people might experience crises that can lead to a lack of purpose in life. Promoting purpose in life consequently is essential but requires a suitable measurement scale.

**Objectives:** This scoping review aimed to identify and map the content, psychometric properties, and answer option scales of instruments that intend to measure purpose in life in adult populations.

**Design:** A scoping review using the COSMIN method was adopted. The review question was: what instruments measuring purpose in life in the adult population are available and what are the content, psychometric properties, and answer option scales of the identified instruments?

**Data Sources:** The database was PubMed. The libraries were APA PsycNet, Wiley Online Library, and Cochrane Library. The search strategy was performed between 1 November 2023-14 February 2024.

**Review Methods:** This review used the scoping review method as described by Arksey and O'Malley. The identified instruments were assessed for quality based on the COSMIN instruments criteria.

**Results:** A total of 348 studies were identified and seven articles were involved in the final synthesis. These seven articles included five instruments measuring the concept of purpose in life of which two instruments had two versions: 1) Purpose in Life Test (20 items, 4 items); 2) Life Engagement Test (6 items); 3) Psychological Well-Being (120 items, 18 items); 4) Self-Assessment Goal Achievement (9 items); and 5) National Institutes of Health Tuberculosis Meaning and Purpose Scale Age 18<sup>+</sup> (18 items). The validity of all instruments was tested using factor analysis, known groups, face, concurrent, convergent, discriminant, and construct validity. The reliability of four instruments was tested by Cronbach's alpha and Spearman-Brown formula.

**Conclusion:** Five instruments were identified measuring purpose in life in the adult population with adequate psychometric properties. The clinical implication of this study is that nurses might consider using

an appropriate instrument to assess the purpose in life in the adult population to provide holistic individualized care to adults, particularly a spiritual dimension.

**Keywords:** Purpose in Life; Adult; Psychometrics; Scoping Review.

## **BACKGROUND**

Purpose in life (PIL) is important because it is valuable to living (Frankl, 1992). PIL promotes self-esteem, positive thinking, and optimism which leads to a sense of health and well-being (Anderson et al., 2022; Balthip et al., 2016; Frankl, 1992; Lewis, 2016; Ryff, 1989). PIL can guide life and help develop the wisdom to deal with problems, especially in adulthood (Frankl, 1992; Kim et al., 2022; Reawtaisong & Supwirapakorn, 2017). This is an age where there are many responsibilities in particular work, family, the economy, and health. These can turn into crises that adults may face causing them to feel insecure in life (Kaplan et al., 2016).

Nurses play an important role in promoting good health in all dimensions of adults, especially, the spiritual dimension of which purpose in life is one dimension. For a person to have a PIL, the important thing is that the nurse must assess their PIL to promote a purpose in life. However, a review of the literature found that measuring the PIL mostly focused on general people (Schultz, 2015) and older adults (Asharani et al., 2022).

A literature review on the measurement of PIL in general people found 12 instruments used to measure PIL, including the Frankl Questionnaire, Purpose in Life Test, Seeking of Noetic Goals, Life Purpose Questionnaire, Ryff's Scales of Psychological Well-being Purpose Subscale, Purpose in Life Scale, Life Engagement Test, Revised Youth Purpose Survey, Existence of Purpose in Life Subscale, Sense of Coherence Scale, Life Regard Index, and Life Attitude Profile-Revised (Schultz, 2015). A literature review on the PIL of older adults had a systematic review of the conceptualization, measures, and determinants (Asharani et al., 2022) and illustrated five instruments used to measure the PIL of the older adults, including Ryff's Psychological Well-Being Scale, Purpose in Life Test, National Institutes of Health Tuberculosis Meaning and Purpose Scale Age 18+, Life Engagement Test, and K-1Scale.

Although previous studies described some instruments that can be used for measuring the PIL of adults, there are no specific instruments for measuring the PIL that require specific and validated assessment instruments that can guide the enhancement of the PIL of individual adults. Thus, this scoping review aimed

to identify and map the content, psychometric properties, and propose option scales of instruments that aim to measure PIL adult populations.

## **METHODS**

A scoping review methodology uses the framework developed by Arksey and O'Malley (2005). This framework consists of five steps: 1) identifying the research question, 2) identifying relevant studies, 3) study selection, 4) charting the data, and 5) collating, summarizing, and reporting the results. This study used the reporting guideline 'PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation' (Equator Network, 2023) and the 'COSMIN methodology for systematic reviews of Patient-Reported Outcome Measures (PROMs)' published by Mokkink et al. (2018).

### **Identifying the research question**

In this review, the scope of inquiry focuses on the analysis of instruments to measure the PIL of the adult population. The questions formulated within the scope of this review are: 1) Which PIL instruments are used in the adult population? 2) What items and/or domains have been developed in the instruments measuring PIL in the adult population? and 3) What are the answer options scales and psychometric properties of the PIL instruments in the adult population?

### **Identifying relevant studies**

This study's search strategy is to identify empirical research in adult PIL instruments. Keywords were identified and related databases and libraries facilitated the identification of empirical literature. The search strategy included the four key elements from the COnsensus-based Standards for the selection of health Measurement INstruments (COSMIN) format: 1) construct, 2) population, 3) type of instrument, and 4) measurement properties (Mokkink et al., 2018). The electronic database used was PubMed. The libraries used were APA-PsycNet, Wiley Online Library, and Cochrane Library. The article reference list was mapped. The search strategy was performed between 1 November 2023-14 February 2024 (Electronic Supplement Material 1). Keywords, databases, and libraries used for searching are presented in **Table 1**.

**Table 1** Keywords and databases used for searching

| Search no.  | Search words   | Number (N) from each database/library |                                    |                      |                  |
|---|--|---------------------------------------|------------------------------------|----------------------|------------------|
|   |  | PubMed                                | American Psychological Association | Wiley Online Library | Cochrane Library |
| S1  | “Purpose in life” OR “Purpose in life test” OR “Life purpose” OR “Goal” OR “Goal test” OR “Life goal” #Title | 11,181                                | 860                                | 2,492                | 260              |
| S2  | S1 AND “Adult”   | 2,672                                 | 207                                | 422                  | 202              |
| S3  | S2 AND “Assessing” OR “Measurement” OR “Measuring” OR “Scale” OR “Instrument” OR “Questionnaire” OR “Tool”   | 557                                   | 83                                 | 317                  | 202              |
| S4  | S3 AND “Validity” OR “Reliability” OR “Psychometric”   | 65                                    | 8                                  | 152                  | 172              |
| <b>Database search limits used</b>                |  |                                       |                                    |                      |                  |
|   | By validation study  | 14                                    |                                    |                      |                  |
|   | By adult   | 14                                    | 8                                  |                      |                  |
|   | By article   |                                       | 8                                  | 148                  |                  |
|   | By Language  | 14                                    |                                    |                      |                  |
|   | By full text   | 14                                    |                                    |                      |                  |
| <b>Summary of the number of selected articles</b> |  | <b>14</b>                             | <b>8</b>                           | <b>148</b>           | <b>172</b>       |

### Study selection

The relevant studies from databases and libraries were identified and exported to the Zotero program, a citation management instrument (Yamacharuen, 2019). Duplicates were identified and removed. The eligibility criteria for inclusion of the articles were: 1) an instrument assessing the PIL concept, 2) the development and testing of an instrument measuring the PIL concept, 3) an adult population, 4) the language was English, and 5) full-text article. The exclusion criteria of the articles were: case studies, case reports, conference abstracts, and reviews. In addition, articles using the term ‘meaning in life’ without explicit



reference to ‘purpose in life’ were excluded because of a different concept. The selected full papers were reviewed based on the inclusion criteria by the research team [S. A., K. B., J. M. L.].

**Quality appraisal:** The research team checked the quality of the articles using the COSMIN Risk of Bias checklist for PROMs (Mokkink et al., 2018). The scoring criteria were: V = very good; A = adequate; D = doubtful; I = inadequate; N = not applicable. The assessment topics of the articles were: content validity, structural validity, internal consistency, cross-cultural validity, measurement invariance, reliability, measurement error, criterion validity, hypotheses testing for construct validity, and responsiveness. Additionally, the GRADE system was used to rate the quality of the evidence; graded by quality level including high, medium, low, and very low.

### **Charting the data**

The research team developed a data chart model according to the COSMIN methodology (Mokkink et al., 2018). The extracted data include authors, year of publication, name of instrument, design, target populations, subscale, number of items, score system, psychometric properties, and quality of the evidence. Two researchers [S. A. and K. B.] discussed charting to determine how to extract data following research questions and objectives.

### **Data analysis and synthesis**

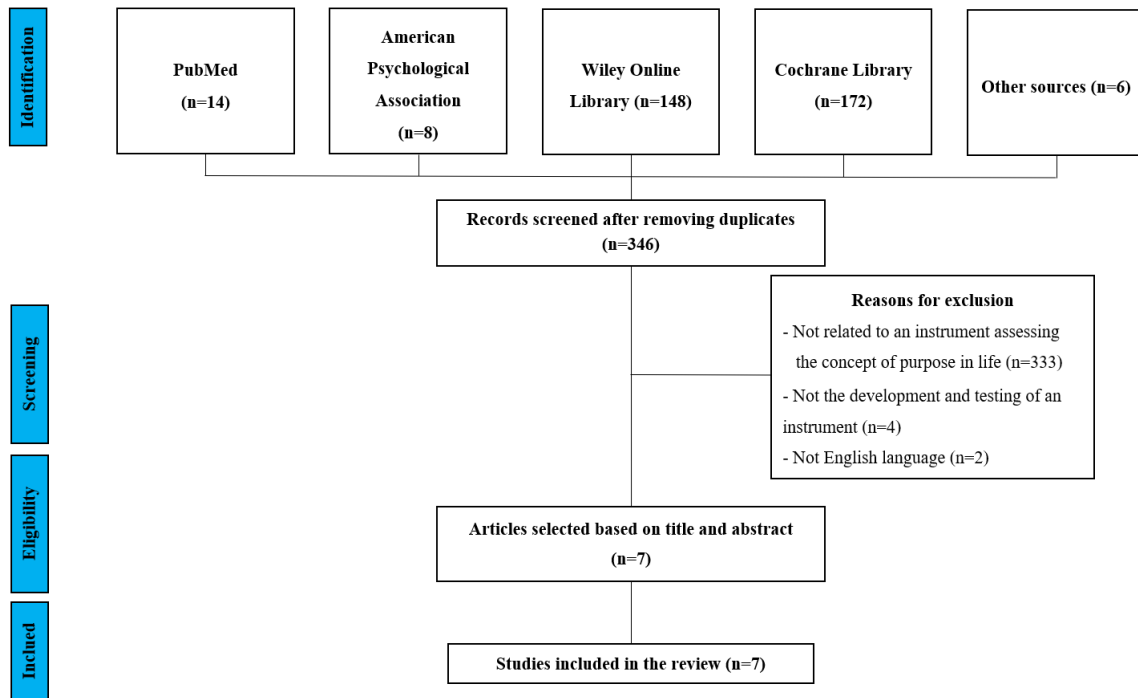
From the analysis of relevant text, a narrative synthesis of the characteristics of the PIL assessment instrument was formed (Arksey & O'Malley, 2005). This included an overview of the name of the instrument and the design of the concepts measured in the instruments. The number and detailed formulated items used in the instruments were identified and summarized. The psychometric properties were identified and presented in an overview to determine the statistical properties.

## **RESULTS**

### **Selection of study**

A total of 348 related articles were identified. After removing the duplicates, 346 articles were selected to review the titles and abstracts. After screening the titles and abstracts, 333 articles were not related to an

instrument assessing the PIL. Four articles were not the development and testing of an instrument to measure the PIL and two articles were not in the English language (Spanish and Swedish version). Therefore, seven articles were identified to be relevant and were included in reading the full-text articles. Of these seven articles, the inclusion criteria were met. Finally, seven articles were involved in the evidence synthesis (**Figure 1**).



**Figure 1** The COSMIN Flow chart (Mokking et al., 2018)

### Study Characteristics

The seven articles included five instruments measuring the PIL (Brubaker et al., 2013; Crumbaugh, 1986; Ryff, 1989; Ryff and Keyes, 1995; Salsman et al., 2014; Scheier et al., 2006; Schulenberg et al., 2011). The five identified instruments were: 1) Purpose in Life Test, 2) Life Engagement Test, 3) Psychological Well-Being, 4) Self-Assessment Goal Achievement, and 5) National Institutes of Health Tuberculosis Meaning and Purpose Scale Age 18+ (**Table 2**). The Purpose in Life Test had two versions: 20 items (Crumbaugh,

1986) and 4 items (Schulenberg et al., 2011). The Psychological Well-Being instrument had two versions: 120 items (Ryff, 1989) and 18 items (Ryff and Keyes, 1995).

### **Content and psychometric properties of instruments**

Of the seven included studies consisting of five instruments, the target population ranged from 104 to 7,108 adults. Most of the instruments are unidimensional but the Psychological Well-Being has six subscales. The number of questions or items ranged between four to 120. All instruments used a Likert scale for the answer option scale. The Likert scales differ between the instruments using a 5 to 7-point scale. The testing of the psychometric properties included various validity and reliability tests. The validity tests used were: structural validity by exploratory factor analysis (Life Engagement Test 6 items, Psychological Well-Being 120 items), confirmatory factor analysis (Purpose in Life Test 4 items, Psychological Well-Being 18 items, the National Institutes of Health Tuberculosis Meaning and Purpose Scale Age 18+ 18 items), known-groups validity (Self-Assessment Goal Achievement 9 items), face validity (Self-Assessment Goal Achievement 9 items), concurrent validity (Purpose in Life Test 20 items), convergent validity (Life Engagement Test 6 items), and discriminant validity (Life Engagement Test 6 items, Psychological Well-Being 120 items). The reliability estimates were tested in four instruments by using the Spearman-Brown formula (Purpose in Life Test 20 items), the test-retest and the alpha coefficient (Life Engagement Test 6 items, Psychological Well-Being 120 items), and the alpha coefficient (Purpose in Life Test 4 items, Psychological Well-Being 18 items). The National Institutes of Health Tuberculosis Meaning and Purpose Scale Age 18+ (18 items) does not specify a method for calculating reliability values.

### **Instrument 1: Purpose-in-Life Test (PIL)**

The PIL measurement was developed by Crumbaugh (1968) and was created to verify that it is consistent with the meaning and purpose in life based on Viktor Frankl's concepts. This instrument includes 20 items ([Electronic Supplement Material 2](#)). The validation study sample consisted of 1,151 adult persons. The answer option scale is a 7-point Likert scale with different answers related to the item, for example 'In life I have' (no goals to clear goals); 'My existence is' (meaningless to meaningful). Validity was tested by concurrent validity of the PIL scores in both two groups, where the adult patient PIL score correlated with

the normal group was 0.47. The internal consistency of the PIL was measured by the Spearman-Brown formula and resulted in an adequate reliability of 0.92. The strength of this instrument is a measuring instrument based on the concept of meaning and purpose in life and has an appropriate number of questions. The weaknesses of this instrument are the questions are related to psychological distress and well-being. In conclusion, the PIL is suitable for use to measure the PIL of the adult person.

In addition, the PIL measurement that was developed by Crumbaugh (1968) was developed as a short form (PIL-SF) by Schulenberg et al. (2011). It was created from a brief 20 items measurement into 4 items ([Electronic Supplement Material 3](#)). The validation study sample consisted of 298 adult persons. The answer option scale is a 7-point Likert scale. The validity was tested by confirmatory factor analysis (CFA): the root mean square error of approximation (RMSEA) was less than 0.06. The Comparative Fit Index (CFI), the Adjusted Goodness of Fit Index (AGFI), and the Tucker-Lewis Index (TLI) exceeded 0.90. The PIL-SF 4 items correlated with well-being and psychological distress was 0.81. The reliability tested by the alpha coefficient was 0.86. The strength of this measuring instrument is based on the PIL concept and adult persons and that adults spent less time answering questionnaires. The weakness of the instrument is the number of short questions. In conclusion, the PIL-SF is suitable for use to measure the PIL of an adult person.

#### **Instrument 2: The Life Engagement Test (LET) by Scheier et al. (2006)**

The LET measurement was created through activities that the person valued. This instrument includes six items ([Electronic Supplement Material 4](#)). The validation study sample consisted of 2,076 adult persons. The answer option scale is a 5-point Likert scale, '1 = strongly disagree' to '5 = strongly agree' The structural validity from the exploratory factor analysis (EFA) used principal component analyses with varimax rotation and Kaiser normalization by maintaining factors with Eigen values >1. It was found that the variance in the LFT was 43%-62%. Factor loadings for all the LET items within the samples ranged from 0.57-0.86. The convergent validity, the LFT was significantly related to other psychosocial factors with high coefficients of 0.58. The discriminant validity, the LFT correlations with the PIL was 0.73. The reliability was tested by two methods: test-retest and internal consistency reliability by the alpha coefficient.

The test-retest correlations ranged from 0.61-0.76 and the alpha coefficient was between 0.72-0.87. The strength of this instrument is adult persons spent less time answering questionnaires and the instrument consists of specific questions about their PIL. The weakness of the instrument is the number of short questions. In conclusion, the LFT is suitable for use to measure the purpose in life of the adult person.

### **Instrument 3: Ryff's Psychological Well-Being (PWB)**

The PWB measurement was relevant to the psychological theory which points to different parts of positive functioning. The initial Ryff's PWB instrument included 120 items divided into six domains (Ryff, 1989). The instrument was shortened to 18 items divided into 6 domains and validated (Ryff and Keyes, 1995) (Electronic Supplement Material 5). The PWB is constructed with six theoretical domains: 1) autonomy, 2) environmental mastery, 3) personal growth, 4) positive relations with others, 5) purpose in life, and 6) self-acceptance. The PWB (120 items) is assessed by a 6-point Likert scale '1 = strongly agree' to '6 = strongly disagree'. The PWB (18 items) is assessed by a 6-point Likert scale '1 = completely disagree' to '6 = completely agree'. The validity of the PWB was tested initially with the 120 items version and 18 items version. Structural validity from the EFA by principal component analysis and the Varimax method found that the variance in well-being was 51.1% (Ryff, 1989). Discriminant validity, the six scales exhibit significant correlations with the previous measures of positive functioning with coefficients between 0.25-0.73. Similarly, there were significant correlations with previous negative functioning measures with coefficients between -0.30 to 0.60 (Ryff, 1989). Structural validity from the CFA by the AGFI found that the questionnaire did not have much congruence with the empirical data because the AGFI was 0.85-0.89 (Ryff & Keyes, 1995) which should be greater than 0.90 (Pasunon, 2015). Structure analysis to highlight the necessity for the theory that drives the instrument reveals t-values around 0.50. This high correlation indicates structural redundancy (Ryff & Keyes, 1995). The strength of this instrument can assess well-being in conjunction with purpose in life. The weakness of the instrument is the large number of questions (Ryff, 1989) and the questionnaire did not have much congruence with the empirical data and indicated structural redundancy (Ryff & Keyes, 1995). In conclusion, the PWB can be used to measure the PIL of the adult person.

#### **Instrument 4: The Self-Assessment Goal Achievement (SAGA) by Brubaker et al. (2013)**

The SASG was created through the goal setting of each adult patient for the development of the doctor's treatment plan to suit the adult patient. This instrument includes 9 items ([Electronic Supplement Material 6](#)). The validation study sample consisted of 104 people who are adult patients with lower urinary tract symptoms (LUTS). The answer option scale has two modules: 1) the baseline module and 2) the follow-up module. The answer option scale is assessed by a 5-point Likert scale. The baseline module is '1=not very important goal' to '5=very important goal' The follow-up module is '1=did not achieve goal' to '5=greatly exceeded goal' The face validity reveals that the questionnaire can be measured. The structural validity by known-groups validity found that the questionnaire had the characterization power of the variables at the significance level of 0.01. The reliability was not assessed because goals differed between patients and changed all the time. The strength of this instrument is the benefit gained from measurement affects treatment planning for adult patients. The weakness is this instrument has not been tested for reliability. In conclusion, if measuring PIL in patients with urinary tract symptoms, this instrument is appropriate but needs to be tested for reliability before actual use.

#### **Instrument 5: National Institutes of Health (NIH) Tuberculosis Meaning and Purpose Scale Age 18+ by Salsman et al. (2014)**

The NIH Tuberculosis Meaning and Purpose Scale Age 18+ measurement was created to evaluate psychological well-being (PWB). This instrument includes 18 items ([Electronic Supplement Material 7](#)). The validation study sample contained 552 adults aged 18 and above. The answer option scale is a 5-point Likert scale by items 1-14 '1 = Strongly disagree' to '5 = Strongly agree' and items 15-18 '1 = Not at all' to '5 = Very much' Structural validity from the CFA by the CFI = 0.94, TLI = 0.98, and RMSEA = 0.131. The internal consistency of this instrument was measured reliability of  $\geq 0.95$ . The strength has an appropriate number of questions and the instrument consisted of specific questions about their PIL. The weakness of this instrument, the answer option scale has two components. This may require clarification before participants complete the questionnaire. In conclusion, this instrument is suitable to use to measure the PIL of the adult person.

### **Critical appraisal of the articles**

The quality of articles according to COSMIN principles by the GRADE approach (Mokkink et al., 2018) found that one article was of high quality (Scheier et al., 2006). There are six articles of moderate quality (Brubaker et al., 2013; Crumbaugh, 1986; Ryff, 1989; Ryff, 1995; Salsman et al., 2014) (Electronic Supplement Material 8).

**Table 2** Characteristics of an instrument that measures the purpose in life of the adult population

| <b>Authors and publication year</b> | <b>PROM</b>                                 | <b>Design</b>   | <b>Target population</b>  | <b>Subscales</b> | <b>Number of items and Score system</b> | <b>Validity</b>   | <b>Reliability</b>   | <b>Quality of the evidence</b> |
|-------------------------------------|---|---|---|------------------|---|---|--|--------------------------------|
| Crumbaugh (1968)                    | The Purpose in Life Test; PIL               | Cross-validation of the purpose in life test based on Viktor Frankl's concepts.             | Non-patients and psychiatric patients (n=1,151)                                   | -                | 20 items<br><br>7-points Likert scale   | - Concurrent validity: PIL scores of patients correlate with the normal group was 0.47  | - The Spearman-Brown formula to 0.92   | Moderate                       |
| Schulenberg et al. (2011)           | The Purpose in Life Test Short Form; PIL-SF | Revise and validity testing   | Undergraduates (n=298)  | -                | 4 items<br><br>7-points Likert scale    | - Structural validity from CFA by the RMSEA was less than 0.06.<br>- Concurrent validity: PIL scores correlated with well-being and psychological distress was 0.81.<br>- The CFI, AGFI, and TLI exceed 0.90. | The reliability tested by the alpha coefficient was 0.86.                            | Moderate                       |
| Scheier et al. (2006)               | The Life Engagement Test; LET               | Cross-validation of the purpose in life test based on activities that are personally valued | Community sample, osteoarthritis patients, and women with breast cancer (n=2,076) | -                | 6 items<br><br>5-point Likert scale     | - Structural validity from the EFA was 43%-62% of the variance.<br>- Factor loadings were 0.57-0.86.<br>- Convergent validity, the LFT  | - The test-retest correlations ranged from 0.61-0.76<br>- The alpha coefficient is a | High                           |



| <b>Authors and publication year</b> | <b>PROM</b>                   | <b>Design</b>                            | <b>Target population</b>   | <b>Subscales</b>  | <b>Number of items and Score system</b>                   | <b>Validity</b>  | <b>Reliability</b>   | <b>Quality of the evidence</b> |
|-------------------------------------|-------------------------------|--|--|---|---|--|--|--------------------------------|
|                                     |                               |  |  |   |   | significant related to the other psychosocial factors with high coefficients of 0.58.<br>- Discriminant validity, the LFT correlations with the PIL was 0.73.  | coefficient of 0.72-0.87.  |                                |
| Ryff (1989)                         | Psychological Well-Being; PWB | Initial development and validity testing | Adults (n=321)   | 6 subscales of psychological well-being<br>- Autonomy<br>- Environmental mastery<br>- Personal growth<br>- Positive relations with others<br>- Purpose in life<br>- Self-acceptance | 120 items; 20 items per scale<br><br>6-point Likert scale | - Structural validity from the EFA was 51.1% of the variance.<br>- Discriminant validity, the six scales exhibit significant and strong correlations with the prior measures with coefficients as high of 0.73 | - The test-retest correlations of 0.82<br>- The alpha coefficient is a coefficient of 0.90 | Moderate                       |
| Ryff and Keyes (1995)               | Psychological Well-Being; PWB | Revise and validity testing              | Noninstitutionalized English-speaking adults, age 25 years and older (n=1,108) | 6 subscales of psychological well-being<br>- Autonomy<br>- Environmental mastery<br>- Personal growth   | 18 items; 3 items per scale<br><br>6-point Likert scale   | - Structural validity from the CFA by the AGFI was 0.85-0.89.<br>- Structure analysis reveals  | - The alpha coefficient is a coefficient of 0.33-0.56                                      | Moderate                       |

| <b>Authors and publication year</b> | <b>PROM</b>  | <b>Design</b>   | <b>Target population</b>  | <b>Subscales</b>   | <b>Number of items and Score system</b> | <b>Validity</b>   | <b>Reliability</b>                | <b>Quality of the evidence</b> |
|-------------------------------------|--|---|---|--|---|---|-----------------------------------|--------------------------------|
|                                     |  |   |   | - Positive relations with others<br>- Purpose in life<br>- Self-acceptance |   | t-values around 0.50.   |                                   |                                |
| Brubaker et al. (2013)              | The Self-Assessment Goal Achievement; SAGA   | Improving individualized treatment plans by setting achievable treatment goals. | Adult patients with lower urinary tract symptoms (LUTS) (n=104) | -  | 9 items<br><br>5-point Likert scale     | - Face validity reveals that the questionnaire can be measured.<br>- Known-groups validity reveals the questionnaire had the characterization power of the variables at a significance level of 0.01. | The reliability was not assessed. | Moderate                       |
| Salsman et al. (2014)               | The National Institutes of Health (NIH) Tuberculosis Meaning and Purpose Scale Age 18 <sup>+</sup> | Cross-validation of the PIL test based on psychological well-being.             | Adults, 18 and above years of age (n=522)                       | -  | 18 items<br><br>5-point Likert scale    | - The CFA by the CFI=0.94, TLI=0.98., and RMSEA=0.131.  | The reliability was $\geq 0.95$ . | Moderate                       |

Table 2 illustrates the characteristics of an instrument that measures the PIL of the adult population. Each instrument can be interpreted as follows: 1) the PIL test of both 20 items and 4 items have a good concurrent validity and excellent reliability, 2) the LFT has a good validity and reliability, 3) the PWB (120 items) has a good validity and reliability. However, although the PWB (18 items) has a structure analysis with t-values within acceptable criteria and has good reliability, the AGFI value is lower than normal. This indicates that the questionnaire did not have much congruence with the empirical data, 4) the SAGA has a good validity but there is no reliability test, and 5) the NIH Tuberculosis Meaning and Purpose Scale Age 18<sup>+</sup> has CFI and TLI values that are within acceptable criteria. Although it has excellent reliability, the RMSEA has values greater than 0.1. This indicates that the questionnaire's consistency with empirical data is at a poor level. (Bernstein et al., 2019; Fabrigar et al., 1999; Hu & Bentler, 1999; Koo & Li, 2016; Pasunon, 2015; Souza et al., 2017).

## **DISCUSSION**

The objective of this scoping review was to identify and map the content, psychometric properties, and answer option scales for instruments that intend to measure PIL in adult populations. There were five instruments identified measuring PIL in the adult population: 1) Purpose in Life Test, 2) Life Engagement Test, 3) Psychological Well-Being, 4) Self-Assessment Goal Achievement, and 5) National Institutes of Health Tuberculosis Meaning and Purpose Scale Age 18<sup>+</sup>. Existing PIL instruments have been developed for various aims: the PIL Test was developed to test the theory; LET was developed to find PIL through hands-on activities. PIL is one domain of the PWB instrument which was developed to assess the well-being of adults in positive structures. Self-Assessment Goal Achievement was developed to guide the treatment plan, and the NIH Tuberculosis Meaning and Purpose Scale Age 18<sup>+</sup> was developed to find a relation with psychological well-being.

The literature review concerning the PIL of adults found that 23 studies worldwide used the PIL test (20 items), the LET (6 items), the PWB (18 items), and the NIH Tuberculosis Meaning and Purpose Scale Age 18+ instruments (18 items) for measuring a PIL of participants (Asharani et al., 2022; Hill & Turiano, 2014; Kim et al., 2013; Nilchantuk, 2020; Reker, 1977). The study using the PIL test (4 items), PWB (120 items), and the SAGA instruments were not found in adults. The PIL (20 items) is the most used instrument and cited, probably because the PIL is a measuring instrument based on the PIL concept, has an appropriate number of questions, has good validity, and has excellent reliability. The PWB instrument (120 items) was not used in adults; maybe because there were too many questions which is inconvenient to use compared to the PWB (18 items). The SAGA was also not implemented. This may be because there is no reliability measurement. Therefore, the PIL (20 items) is the most appropriate measurement instrument for a PIL in adulthood.

### **Implications of the study for nursing**

Assessment of PIL can be linked to nursing care. Nurses can assess PIL scores and promote PIL to patients. Hedberg et al. (2011) studied 'Purpose in life over five years: a longitudinal study in a very old population'. The PIL of older adults in Sweden was assessed over five years using the PIL instrument. The result found that the PIL of these individuals was lower, especially in depressed women, at a significant level of 0.01. Pearson et al. (2013) studied 'Normative data and longitudinal invariance of the Life Engagement Test in a community sample of older adults' The PIL was assessed by the LET. The result found that older adults in the community have a high PIL but it changes over time according to the effect of significant life events. Kim et al. (2013) studied 'Purpose in life and reduced incidence of stroke in older adults: The health and retirement study'. The PIL of stroke patients was assessed in older adults using the Ryff and Keyes' Scales of PWB. The result showed that PIL was related to the chance of having a stroke at a significant level of 0.01. Hill & Turiano (2014) studied 'Purpose in Life as a Predictor of Mortality across Adulthood' which used the PWB instrument to measure PIL among 7,108 adults. In a follow-up study after 14 years, the adults in the previous study who died within the 14-year follow-up timeframe had lower scores for PIL than adult persons who were still alive in the follow-up period. Tkatch et al. (2021) studied 'Reducing loneliness

and improving well-being among older adults with animatronic pets' The PIL of older adults was assessed by the NIH Tuberculosis Meaning and Purpose Scale Age 18<sup>+</sup>. The result found that the PIL improved and loneliness decreased.

Therefore, assessing the PIL in adulthood is important for nurses because nurses can use the results from the PIL assessment to promote PIL for adulthood which leads to well-being (Pearson et al., 2013) and prevent loneliness (Tkatch et al., 2021), depression (Hedberg et al.,2011), and stroke (Kim et al., 2013). Moreover, having a PIL results in a longer lifespan (Hill & Turiano, 2014).

### **Strengths of the study**

The strength of this study was the scoping review process. This is based on Arksey and O'Malley framework (2005), 'PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation' (Equator Network, 2023) and the 'COSMIN methodology for systematic reviews of Patient-Reported Outcome Measures (PROMs)' published by Mokkink et al. (2018) which affects credibility. Results are reported with psychometric properties. In addition, this scoping review focused on the PIL of an adult person, which focuses on a specific population.

### **Limitations of the Study**

The limitation of this scoping review is that studies on the PIL concept are not yet widespread. In addition, a specific study of measurement PIL instruments has few studies.

### **CONCLUSION**

There are five instruments for measuring the PIL of an adult person with adequate psychometric properties. However, if PIL measurement instruments are used in research, they should be checked for validity and reliability before use to test the quality of the instrument. Measuring PIL affects clinical implications. Nurses might consider using an appropriate instrument to assess the PIL of adult populations to provide individualized support to adults with spiritual health issues.

## References

- Abbott, R. A., Ploubidis, G. B., Huppert, F. A., Kuh, D., Wadsworth, M. E., & Croudace, T. J. (2006). Psychometric evaluation and predictive validity of Ryff's psychological well-being items in a UK birth cohort sample of women. *Health and Quality of Life Outcomes*, 4(76), 1-16.  
<https://doi.org/10.1186/1477-7525-4-76>
- Anderson, K. A., Fields, N. L., Cassidy, J., & Peters-Beumer, L. (2022). Purpose in life: A reconceptualization for very late life. *Journal of Happiness Studies*, 23, 2337–2348.  
<https://doi.org/10.1007/s10902-022-00512-7>
- Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological Framework. *International Journal of Social Research Methodology*, 8(1), 19-32.  
<https://doi.org/10.1080/1364557032000119616>
- Asharani, P. V., Lai, D., Koh, J., Subramaniam, M. (2022). Purpose in life in older adults: A systematic review on conceptualization, measures, and determinants. *International Journal of Environmental Research and Public Health*, 19(5860), 1-25. <https://doi.org/10.3390/ijerph19105860>
- Balthip, K., Petchruschatachart, U., Piriyaakontorn, S., Tiraphat, N., & Liamputtong, P. (2016). Application of purpose in life and self-sufficient economic philosophy in enhancing the holistic health promotion of Thai adolescents. *Songklanagarind Journal of Nursing*, 36(3), 111-130.
- Bernstein, D. N., Houck, J. R., Mahmood, B., & Hammert, W. C. (2019). Responsiveness of the PROMIS and its concurrent validity with other region- and Condition-specific PROMs in patients undergoing Carpal Tunnel Release. *Clinical Orthopaedics and Related Research*, 477(11), 2544-2551.  
<https://doi.org/10.1097/CORR.0000000000000773>
- Brubaker, L., Piault, E. C., Tully, S. E., Evans, C. J., Bavendam, T., Beach, J., ... Trocio, J. (2013). Validation study of the Self-Assessment Goal Achievement (SAGA) questionnaire for lower urinary tract symptoms. *The International Journal of Clinical Practice*, 67(4), 342-350.  
<https://doi.org/10.1111/ijcp.12087>

- Crumbaugh, J. C. (1968). Cross-validation of purpose-in-life test based on Frankl's concepts. *Journal of Individual Psychology*, 24(1), 74-81.
- Equator Network. (2023). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. Retrieved from <https://www.equator-network.org/reporting-guidelines/prisma-scr/>
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4(3), 272-299. <https://doi.org/10.1037//1082-989X.4.3.272>
- Frankl, V. E. (1992). *Man's search for meaning* (2nd ed.). Vienna, Austria: Beacon Press.
- Hedberg, P., Brulin, C., Alex, L., & Gustafson, Y. (2011). Purpose in life over a five-year period: a longitudinal study in a very old population. *International Psychogeriatrics*, 23(5), 806–813. <https://doi.org/10.1017/S1041610210002279>
- Hill, P. L., & Turiano, N. A. (2014). Purpose in life as a predictor of mortality across adulthood. *Psychological Science*, 25(7), 1482-1486. <https://doi.org/10.1177/0956797614531799>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55. <https://doi.org/10.1080/10705519909540118>
- Kaplan, R. L., Khoury, C. E., Field, E. R. S., & Mokhbat, J. (2016). Living day by day: The meaning of living with HIV/AIDS among women in Lebanon. *Global Qualitative Nursing Research*, 3, 1–13. <https://doi.org/10.1177/2333393616650082>
- Kim, E. S., Sun, J. K., Park, N., & Peterson, C. (2013). Purpose in life and reduced incidence of stroke in older adults: 'The Health and Retirement Study' *Journal of Psychosomatic Research*, 74(5), 427-432. <https://doi.org/10.1016/j.jpsychores.2013.01.013>
- Kim, E. S., Chen, Y., Nakamura, J. S., Ryff, C. D., & VanderWeele, T. J. (2022). Sense of purpose in life and subsequent physical, behavioral, and psychosocial health: An outcome-wide approach. *American Journal of Health Promotion*, 36(1), 137-147. <https://doi.org/10.1177/08901171211038545>

- Koo, T. K., & Li, M. Y. (2016). A guideline of selecting and reporting intraclass correlation coefficients for reliability research. *Journal of Chiropractic Medicine, 15*(2), 155-163.  
<http://dx.doi.org/10.1016/j.jcm.2016.02.012>
- Lewis, N. A. (2016). *Sense of purpose in life and risk for onset of chronic illness* (Master's thesis, Carleton University, Ottawa, Canada). Retrieved from  
<https://repository.library.carleton.ca/concern/etds/7w62f925w>
- Mokkink, L. B., Prinsen, C. A. C., Patrick, D. L., Alonso, J., Bouter, L. M., de Vet, H. C. W., & Terwee, C. B. (2018). COSMIN methodology for systematic reviews of Patient-Reported Outcome Measures (PROMs). Retrieved from [https://cosmin.nl/wp-content/uploads/COSMIN-syst-review-for-PROMs-manual\\_version-1\\_feb-2018.pdf](https://cosmin.nl/wp-content/uploads/COSMIN-syst-review-for-PROMs-manual_version-1_feb-2018.pdf)
- Nilchantuk, C. (2020). Assessment tools for measuring meaning in life. *Ratchaphruek Journal, 18*(3), 1-10.
- Pasunon, P. (2015). Validity of questionnaire for social science research. *Journal of Social Sciences Srinakharinwirot University, 18*(18), 375-396.
- Pearson, E. L., Windsor, T. D., Crisp, D. A., Butterworth, P., Pilkington, P. D., & Anstey, K. J. (2013). Normative data and longitudinal invariance of the Life Engagement Test in a community sample of older adults. *Quality of life research, 22*(2), 327–331.  
<https://doi.org/10.1007/s11136-012-0146-2>
- Reawtaisong, P., & Supwirapakorn, W. (2017). The effects of logotherapy on meaning in life of the elderly with cancer. *Journal of The Police Nurses, 9*(1), 47-58.
- Reker, G. T. (1977). The purpose-in-life test in an inmate population: an empirical investigation. *Journal of Clinical Psychology, 33*(3), 688-693.
- Ryff, C. D. (1989). Happiness is everything, or is it? explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*(6), 1069-1081.
- Ryff, C. D., & Keyes, C. L. (1995). The structure of Psychometric Well-Being revisited. *Journal of Personality and Social Psychology, 69*(4), 719-727. <https://doi.org/10.1037//0022-3514.69.4.719>



- Salsman, J. M., Lai, J. S., Hendrie, H. C., Butt, Z., Zill, N., Pilkonis, P. A., ... Cella, D. (2014). Assessing psychological well-being: Self report instruments for the NIH toolbox. *Quality of Life Research*, 23(1), 205-215. <https://doi.org/10.1007/s11136-013-0452-3>
- Scheier, M. F., Wrosch, C., Baum, A., Cohen, S., Martire, L. M., Matthews, K. A., ... Zdaniuk, B. (2006). The life engagement test: Assessing purpose in life. *Journal of Behavior Medicine*, 29(3), 291-298. <https://doi.org/10.1007/s10865-005-9044-1>
- Schulenberg, S. E., Schnetzer, L. W., & Buchanan, E. M. (2011). The purpose in life test-short form: Development and psychometric support. *Journal of Happiness Studies*, 12(5), 861-876. <https://doi.org/10.1007/s10902-010-9231-9>
- Schultz, D. (2015). Measuring purpose in life: A review. *Graduate Student Journal of Psychology*, 16, 5-24. <https://doi.org/10.52214/gsjp.v16i.10896>
- Souza, A. C., Alexandre, N. M. C., & Guirardello, E. B. (2017). Psychometric properties in instruments evaluation of reliability and validity. *Epidemiologia e servicos de saude: revista do Sistema Unico de Saude do Brasil*, 26(3), 649–659. <https://doi.org/10.5123/S1679-49742017000300022>
- Springer, K. W., & Hauser, R. M. (2006). An assessment of the construct validity of Ryff's Scales of Psychological Well-Being: Method, mode, and measurement effects. *Social Science Research*, 35(4), 1080-1102. <https://doi.org/10.1016/j.ssresearch.2005.07.004>
- Tkatch, R., Wu, L., MacLeod, S., Ungar, R., Albright, L., Russell, D., ... Yeh, C. S. (2021). Reducing loneliness and improving well-being among older adults with animatronic pets. *Aging & Mental Health*, 25(7), 1239-1245. <https://doi.org/10.1080/13607863.2020.1758906>
- Yamacharuen, R. (2019). Zotero collecting/managing/sharing/citing. Retrieved from <https://clibdoc.psu.ac.th/public31/KM-KYL/work-manual/ratana.pdf>