

EDITH COWAN UNIVERSITY STAFF HEALTH AND WELLBEING PROGRAM: Distinguishing Principles of Research and Evaluation

Abstract

A collection of research of the distinguishing principles for evaluation of health and wellbeing programs based on utilization-focused evaluation involving stakeholders' feedback.

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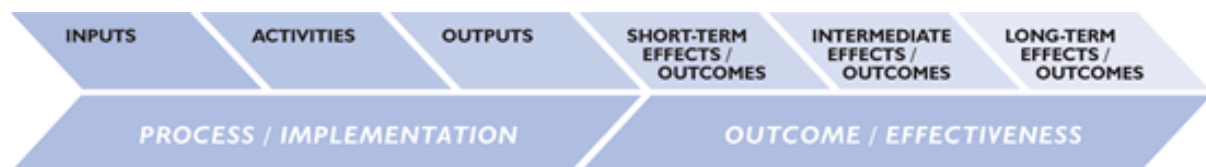
Distinguishing Principles of Research and Evaluation

Concept	Research Principles	Program Evaluation Principles
Planning	Scientific Method	Framework for program evaluation
	<ul style="list-style-type: none"> -State hypothesis -Collect data -Analyse data -Draw conclusions 	<ul style="list-style-type: none"> -Engage stakeholders -Describe the program -Focus the evaluation design -Gather credible evidence -Justify conclusions -Ensure use & share lessons learned
Decision Making	Investigator-controlled	Stakeholder- controlled
	<ul style="list-style-type: none"> -Authoritative 	<ul style="list-style-type: none"> -Collaborative
Standards	Validity Repeatability program	Evaluation standards
	<ul style="list-style-type: none"> -Internal (accuracy, precision) -External (generalisability) 	<ul style="list-style-type: none"> -Utility -Feasibility -Propriety -Accuracy
Questions	Facts	Values
	<ul style="list-style-type: none"> -Descriptions -Associations -Effects 	<ul style="list-style-type: none"> -Merit (i.e. Quality) -Worth (i.e. Value) -Significance (ie. Importance)
Design	Isolate changes & control circumstances	Incorporate changes & account for circumstances
	<ul style="list-style-type: none"> -Narrow experimental influences -Ensure stability over time -Minimalise context dependence -Treat contextual factors as confounding (e.g., Randomisation, adjustment, statistic control) -Understand that comparison groups are a necessity 	<ul style="list-style-type: none"> -Expand to see all domains of influence -Encourage flexibility & improvement -Maximise context sensitivity -Treat contextual factors as essential information (e.g., system diagrams, logic models, hierarchical or ecological modelling) -Understand that comparison groups are optional (and sometimes harmful)
Data collection	Sources	Sources

	<ul style="list-style-type: none"> -Limited number (accuracy preferred) -Sampling strategies are critical -Concern for protecting human subjects 	<ul style="list-style-type: none"> -Multiple (triangulation preferred) -Sampling strategies are critical -Concern for protecting human subjects, organisations & communities
	Indicators/Measures	Indicators/Measures
	<ul style="list-style-type: none"> -Quantitative -Qualitative 	<ul style="list-style-type: none"> -Mixed methods (quantitative, qualitative & integrated)
Analysis & Synthesis	Timing	Timing
	<ul style="list-style-type: none"> -One-time (at end) 	<ul style="list-style-type: none"> -Ongoing (formative & summative)
	Scope	Scope
	<ul style="list-style-type: none"> -Focus on specific variables 	<ul style="list-style-type: none"> -Integrate all data
Judgements	Implicit	Explicit
	<ul style="list-style-type: none"> -Attempt to remain value-free 	<ul style="list-style-type: none"> -Examine agreement on values -State precisely whose values are used
Conclusions	Attribution	Attribution & Contribution
	<ul style="list-style-type: none"> -Establish time sequence -Demonstrate plausible mechanisms -Control for confounding -Replicate findings 	<ul style="list-style-type: none"> -Establish time sequence -Demonstrate plausible mechanisms -Account for alternative explanations -Show similar effects in similar contexts
Uses	Disseminate to interested audiences	Feedback to stakeholders
	<ul style="list-style-type: none"> -Context & format varies to maximise comprehension -Disseminate to interested audiences 	<ul style="list-style-type: none"> -Focus on intended uses by intended users -Build capacity -Content & format varies to maximise comprehension -Emphasis on full disclosure -Requirement for balanced assessment



Figure 1.1
Evaluation Framework



(Centre for Disease Control and Prevention – Program Performance and Evaluation Office)

Participatory model for ensuring a systematic evaluation:

- Design the evaluation
- Collect the data
- Analyse and interpret the data
- Report the findings

The mission statement clearly defines what your organisation has set out to do and reflects your values and intent, e.g. **“To encourage good physical and mental health of all staff to**

improve well-being through evidence-based initiatives by collaboration among program staff in each department”.

Data access and availability – data collected at baseline and periodically since start of program. Utilised to draw conclusions within the organisation. May be simple or more sophisticated, where data is entered into a database by each staff member, allowing for integrated summaries of individual’s participation and outcomes.

What are the external factors identified by the literature or the stakeholders that affect program implementation?

Summary

- Describing the initiative provides an understanding of the social, cultural, economic, political, and structural context of the organisation. It supports the development of recommendations at the end of the process. Knowing a program’s strengths and weaknesses allows the team to develop a feasible and useful evaluation.

- A thorough understanding of the program or policy is achieved only from the multiple perspectives of the program’s administrators, funders, staff, and advocates, as well as its current and past participants.

- A logic model provides a tool for stakeholders so that they can have a shared understanding of the initiative, can clarify benchmarks, and can identify strengths and weaknesses.

- Successful program and policy initiatives are comprehensive, meet the needs of the population at risk, are well resourced and based on theory-based strategies.

(Harris, 2016)

Deciding on Evaluation Design

Experimental – compare outcome of intervention on one or more groups with an equivalent group that did not receive intervention e.g., Compare regular mindfulness participants with non-participants.

Quasi-experimental – comparison of outcome data among other universities.

Observational – includes time-series analysis, cross-sectional surveys and case studies.

(Posavac, E. J., 2011)

The logic of experimental designs -

By statistically comparing the outcomes of the control group with the treatment group, the evaluator can assess the extent to which the outcomes can be attributed to the treatment (in other words, to judge whether the intervention caused the outcomes). Random assignment distributes potential extraneous or unknown causes across both groups so that the only difference between the two groups is the intervention. This increases confidence in determining causality because any other influence on the observed outcome would only occur by chance.

(Patton, M. Q., 2008)

Selecting Questions for Process Evaluation

A process evaluation component provides additional insights and is especially helpful if the initiative does not show the expected effect and the evaluators have to explain what reasons might explain the results. Having process evaluation data would also help in developing recommendations for program improvement.

In order to increase effectiveness, focus is on changed relationships and connections.

Supporting self-organising networks among participants will infuse new energies and synergies into organisation. Value of networking is hard to measure; it constitutes a vision

rather than a goal, involves bringing leaders together to get them interacting for intense periods of time, to engage in dialogue around what actions and initiatives would revitalise the program. The outcomes will be entirely emergent.

In a small group of stakeholders, each person is asked to write down one or two questions that are important for the evaluation to answer once the purpose of the evaluation has been carefully explained, as well as how much time is available for the evaluation and how the results are likely to be used. The facilitator presents each question to the group and sorts the questions into themes that are predetermined or emerge with the process. These could include a) assessment of resources – human, financial or material, b) assessment of the process of implementation, c) identification of initiative components and contribution to the initiative, d) data collection processes and management information systems, e) the effectiveness of the intervention for getting to outcomes.

The next step is prioritising the questions for evaluation or alternatively having individuals voting for the questions during the process. Delbecq and Gustafson (1975) described a nominal group technique such as:

1. Each member of the stakeholder group makes a list of evaluation questions he or she would like answered.
2. The facilitator asks members of the group in turn to provide one question each to a “master list” on a flip chart or a board that is visible to the whole group. As an evaluation question is added, a show of hands provides a count of how many people included a similar question in their lists. This number is recorded next to the question on the flip chart. The questions on the participants’ lists are cancelled as they are accounted for on the master list.

3. The process continues until all members have contributed all the items on their list that are different from previous questions and all the questions have been crossed off their lists.
4. The facilitator reviews the master list with the group and, with the consensus of the group, eliminates or merges questions that appear similar and that ask fundamentally the same question.

The final list sets the state for deciding on the final set of questions. If the evaluation is to be useful and the results utilised, questions that are of primary importance to the person requesting the evaluation must be answered.

Involving Stakeholders in Selecting the Evaluation Questions

The list of questions can be put up on flip charts arranged around the room or written up on a board as they are being submitted. The questions for evaluation are influenced by:

- Relevance of the questions to program development and replication
- Expertise of the evaluation team and resources available for the evaluation
- Time frame required for the evaluation
- Access to data

Previously developed activity objectives that describe the specific activities that will take place as well as the outputs are also important for the evaluation as they form the expectations of the program and the starting point for determining if the program was implemented as planned, as well as if the implementation resulted in the expected outcomes. For example, an activity objective such as: “Staff of XYZ will organise 20 advocacy events for 100 persons each by the third quarter after implementation” reframed as an evaluation question would be “How many advocacy events did the staff of XYZ organise and how many persons participated?”

Questions may be based on relevance to program development and replication, in which case focus may be more on how well the events were implemented and how effective they are for producing outcomes. Questions may be based on knowledge of the purpose, time frame, budget and how any questions fit into a matrix of questions. Their overall purpose would be to make sure they fulfil the requirements of the contract and have the best view of the overall intent of the evaluation.

An important consideration is the hierarchy of questions and how answering one question may allow you to make the assumption that the previous question need not be answered.

Outcome Evaluation Question Factors

The evaluation questions may be influenced by a number of factors including:

- The concerns and priorities of the stakeholders
- The components of the logic model
- The initiative's previously developed outcome objectives
- The expertise of the evaluation team
- The resources available for the evaluation



The stakeholders' expectations of the program may be different from the stated objectives. The Logic Model (Figure 1.3) may help frame evaluation questions.

Basic Framework for Completing a Logic Model

Example:

Question: What do we want to know about?

Resources	Program Activities	Outputs	Outcomes/Objectives	
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What human, financial, or material resources were put into or used for this initiative?	What types of activities were undertaken for this initiative?	What happened early on as a result of this initiative that demonstrates that it is being implemented?	What short-term outcomes occurred as a result of this initiative? What effect(s) did the program have on the risk factor(s) that it was intended to change?	 What medium-term outcomes occurred?
				 What long-term Outcomes occurred?

Evaluation Activities

Gaining Insight to Change Practice	Assessing Effects
Understanding how the initiative was implemented and what happened to demonstrate that the intervention was working	Understanding the effects of the initiative

Figure 1.3

Example of Logic Model-Inspired Questions

Resources	Activities	Outputs	Outcome Evaluation Questions
What human, financial, or other resources were used for activities or set of activities undertaken to achieve the stated outcomes?	<p>What activities or set of activities were used to achieve the stated outcome objectives? For example.</p> <ul style="list-style-type: none"> -Media programming and interviews -Outreach education and distribution of information materials -Training policy makers 	<p>What evidence is available to show that the activities were implemented?</p> <p>For example, how many education sessions were held?</p> <p>How many policymakers participated?</p> <p>How many e-mails and text messages were sent out?</p>	<p>What evidence is available to show that short-term objectives were met, for example,</p> <p>-Increased knowledge about the topic of interest across multiple stakeholders?</p>

	-Policy analysis -Policy advocacy activities		
			What evidence is available to show that intermediate objectives were met, eg. Changes in attitudes, social norms, policies, environment?
			What evidence is available to show increased exercise in schools to 30 minutes was implemented and sustained: lower drug use, fewer injuries, behaviours adopted?
Assumptions: There were resources available to carry out the activities and policymakers are willing and able to implement this policy across the entire organisation.			

Figure 1.4

Once the questions have been sorted the group is ready to prioritise the questions for evaluation using the nominal group technique described previously. The final list sets the stage for deciding on the final set of questions. A traditional two-by-two table can be used to sort the questions and identify priorities (see figure 1.5).

Two-by-Two Table

		Ability to improve evaluation knowledge	
		HIGH	LOW
Ability to contribute to the decision-making process	HIGH	Best Choice	Good Choice
	LOW.	Okay Choice	Poor Choice

Figure 1.5

Improvement-oriented, formative evaluation questions may include:

- What are the program's strengths and weaknesses?
- To what extent are participants progressing towards the desired outcomes?
- Which types of participants are making good progress and which types aren't doing so well?
- What kinds of implementation problems have emerged and how are they being addressed?

(Patton, M. Q., 2008)

Outcome evaluation questions may include:

- Did participants' level of knowledge or awareness change with regard to the program focus?
- What percentage of participants increased their use of a strategy or technique for the reduction of stress and anxiety?
- What percentage of participants reduced their level of stress and anxiety?
- What percentage of participants improved their perception of wellbeing?
- Did the reduction of anxiety improve staff members' perception of work capability?
- Did a policy that was aimed at improving the wellbeing of staff in a university have any effect on work production among staff in each department?
- Did an intervention to practice mindfulness result in less anxiety over a 3/6/12-month period?

- Did an intervention to practice mindfulness result in improved wellbeing over a 3/6/12-months period?
- What were the costs of the initiative relative to the benefits?

Indicators

Indicators are the quantitative or qualitative variables that allow the changes that occur as a result of an intervention to be measured. They are used to provide the answers to the questions and show whether the intended results are achieved. They are objectively verifiable and can be assessed repeatedly. Quantitative indicators measure changes in numerical values, qualitative indicators measure changes that are less well defined but that are agreed to by the stakeholders as measures of success of the intervention. Numerical indicators that show change has occurred from a baseline measurement can be plotted in a bar graph or shown in a pie chart. Indicators have to be related to the objective and must be sensitive enough to show a change in status.

Measuring Concepts and Constructs

Outcome evaluation often use surveys, individual interviews, focus groups, and observation techniques to assess concepts and constructs that can be difficult to measure, eg. Measuring happiness requires more than one indicator because happiness is multidimensional and reflects a state of well-being and contentment. The process of specifying the indicator requires fully expanding the concepts and deciding on the best means for determining their existence within the sample being studied.

- Individual level (knowledge, attitude, practices)
- Interpersonal level (peer or family influences)
- Community level (jobs and transportation and their influence on utilisation)

- Organisational level (organisational norms, practices, policies and services to influence an individual's ability to access and utilise services within the institution)
- Public-policy level (laws and jurisdiction-wide policies that influence utilisation of services by members of the community)

Tools for data collection vary from quantitative to qualitative; the tool will also determine the size of the sample. A self-completed survey has potential to collect very large amounts of data while a face-to-face interview lends itself to a smaller sample size. Focus groups of 6-8 per group may limit number of participants and require many hours of collection but over time may collect a relatively large number of interviews.

Tools for Outcome Evaluation (What you use to answer the questions)

Data Collection Tool	Level of Expertise Required	Cost
Self-administered surveys	Expertise to develop, little to gather, expertise to analyse	Moderate
Face to face interviews	Skill to gather and considerable skill to code and analyse	Expensive
Archival data	Little skill to gather but some skills to analyse	Inexpensive
Observation	Considerable skill to gather, code and analyse data	Inexpensive but can be time-consuming
Participant observation	Skill to gather and skill to analyse	Inexpensive but can be time-consuming
Record reviews	Little skill to gather but some skills to analyse	Inexpensive
Open-ended questions on survey	Little skill to collect and analyse	Moderate
Focus-group interviews	Considerable skill to gather, code and analyse data	Depends on who does it, in-house is less expensive

Figure 1.6

Assessing Effectiveness of Policy Change from the Perspective of Stakeholders

In a recent study assessing the implementation of new policies, stakeholders who were involved in the program were asked to provide their perceptions on the effectiveness of the

policies in a face-to-face interview survey style data collection tool. They assessed the effectiveness of a range of outcomes resulting from policy change using the scale 1-5 provided.

Scale 1 2 3 4 5

1 = I don't know

2 = very ineffective

3 = somewhat ineffective

4 = somewhat effective

5 = very effective

- In changing social norms
- In increasing access to opportunities for physical activity
- In increasing access to opportunities for healthy nutrition
- In strengthening organisational capacity
- Other outcome (Specify)

(Harris, M. J. 2016)

Journal of Occupational Health – 2017 Case Study

Tailoring H & WB initiatives to needs of employees in order to increase engagement and uptake.

Examples of questions from programs targeted and matched to health problems of the specific population:

Q – What factors are important for improving your health and wellbeing at work?

- A) feeling happier at work
- B) wanting to eat a healthier diet
- C) increasing levels of physical activity
- D) wanting to be a healthier weight

A large number did not feel a “reduction in alcohol” was important in improving H & WB at work.

Q – What factors affect your H & WB at work?

A) physical tasks such as moving and handling

B) work pressures, such as unrealistic deadlines

C) poor relationship with colleagues

Least affected H & WB was “inflexible working patterns”.

Q – What types of resources could be useful to support your H & WB at work?

A) provision of physiotherapy

B) better access to healthy, affordable food

C) subsidised gym membership/cycling scheme.

Least useful - “smoking cessation” “advice & support on alcohol intake” “literature concerning health topics” & “health promotion events”.

Q – Do you agree/disagree with the statement “I feel maintaining a healthy lifestyle in the workplace is achievable?” Y/N

(Chetty, L. 2017)

Pilot trial of promoting resilience in the workplace

Participants vs Non-Intervention Comparison group (similar characteristics eg. age, gender)

Pre-test measurements at Time 1

Post-test measurements at Time 2

Follow-up measurements at Time 3 (3/6 /12months later)

Depression/anxiety/stress - measured by the DASS-21 (7 item Likert scale)

Wellbeing – measured by Satisfaction with Life Scale

Psychological Wellbeing – Ryff's scales of psychological wellbeing – 18 items (see

Appendix 1)

Work-life fit - “How easy or difficult is it for you to manage the demands of your work and your family/personal life?” rated from 1 very difficult to 4 very easy.

Work-life balance - “All in all, I am satisfied with the balance between my work and family/personal life”. rated from 1 strongly disagree to 5 strongly agree.

Job satisfaction - “I am satisfied with my work life” rated from 1 strongly disagree to 5 strongly agree.

Coping self-efficacy – relates to how confident the individual is to do the tasks in difficult times eg. “Talk positively to yourself” and “sort out what can be changed and what cannot be changed” rated on a Likert scale – 1 “I can’t do this at all” to 7 “I am certain I can do this”.

Social skills scale - “In social situations, it is always clear to me exactly what to say and do” - Likert 1 – strongly disagree to 7 – strongly agree.

Limitations – small number of volunteers possibly due to stigma attached to mental illness and negative perceptions may have deterred participation. The use of comparison group sought to overcome this limitation by using similar timing, content of measures and assessment of demographics to minimise differences between groups.

(Millea et al., 2008)

Self-Compassion Questionnaire – Kristen Neff

Please read through each statement carefully and indicate how often you behave in the stated manner:

1. Almost Never 2. Occasionally 3. About half of the time 4. Fairly Often 5. Almost Always

1. I’m disapproving and judgemental about my own flaws and inadequacies.

2. When I’m feeling down I tend to obsess and fixate on everything that’s wrong.

3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.
4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.
5. I try to be loving towards myself when I'm feeling emotional pain.
6. When I fail at something important to me I become consumed by my feelings of inadequacy.
7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.
8. When times are really difficult, I tend to be tough on myself.
9. When something upsets me I try to keep my emotions in balance.
10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
11. I'm intolerant and impatient towards those aspects of my personality I don't like.
12. When I'm going through a very hard time, I give myself the caring and tenderness I need.
13. When I'm feeling down, I tend to feel like most other people are probably happier than I am.
14. When something painful happens I try to take a balanced view of the situation.
15. I try to see my failings as part of the human condition.
16. When I see aspects of myself that I don't like, I get down on myself.
17. When I fail at something important to me I try to keep things in perspective.

18. When I'm really struggling, I tend to feel like other people must be having an easier time of it.
19. I'm kind to myself when I'm experiencing suffering.
20. When something upsets me I get carried away with my feelings.
21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.
22. When I'm feeling down I try to approach my feelings with curiosity and openness.
23. I'm tolerant of my own flaws and inadequacies.
24. When something painful happens I tend to blow the incident out of proportion.
25. When I fail at something that's important to me, I tend to feel alone in my failure.
26. I try to be understanding and patient towards those aspects of my personality I don't like.

(Neff, K. 2021)

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Recommendations

In order to implement this research, it would be beneficial to apply the following course of action:

2. Planning - Establish a framework for program evaluation by gathering stakeholders together for feedback. These may be Wellness Innovators (individual Wellness Champions from each school/centre) recommended by Department Managers in order to involve stakeholders in collaborative decision making.
3. Decision Making - Describe the program in focus and facilitate the generation of questions using the nominal group technique (Delbecq & Gustafson, 1975) as outlined on pages 7-9.
4. Questions - Some questions may be pre-determined, and some may emerge with the process which may then be grouped into themes for a “master list”. Process evaluation questions may arise along with outcome evaluation questions, and should be based on utility, feasibility, propriety and accuracy. The Logic Model (Fig. 1.3, p 9) may be used to frame evaluation questions to identify short-term, medium-term and long-term outcomes. Questions may then be prioritised according to merit, worth and significance using the two-by-two table (Fig. 1.5, p 11). Examples of formative and outcome evaluation questions are listed on page 12.
5. Design – Incorporate all areas of influence and circumstances from the concern and priorities of the stakeholders (using flexibility and sensibility and acknowledge contextual factors). Design will vary depending on the intervention/program to be measured. Comparison groups are optional.

6. Data Collection – Data may be collected from multiple sources with concern for protecting individuals (ethical, confidential) by using mixed methods (quantitative, qualitative and integrative) including surveys, individual interviews and focus groups. Concepts and constructs that are multidimensional and difficult to measure, such as happiness, may require more than one indicator. Tools for data collection vary, see Figure 1.6 for an example (p 14). Examples of survey questions from previous research of health and wellbeing programs in the workplace are included on pages 15 – 19.
7. Analysis & Synthesis – Integrate all data with ongoing timing from baseline measurement to show change that has occurred, e.g., after 3, 6, 9, 12, 24 months etc.
8. Judgements – Stakeholders examine agreement on values to assess effectiveness of program (feedback) using Data Collection Tool (Fig. 1.6) and scale on page 15.
9. Conclusions – Establish time sequence, demonstrate plausible mechanisms, account for alternative explanations, justify conclusions.
10. Uses – Adjust format and content to each program, ensure use and share lessons learned.

Appendix 1

Psychological wellbeing (PWB) is a subjective construct that has been historically difficult to measure. In early literature the defining features of wellbeing often focused on the distinction between positive and negative affect as an indicator of happiness. Bradburn (1969) made reference to the ancient Greek philosopher Aristotle, who stated that the highest form of human achievement was happiness (eudomania). Later studies (Waterman, 1984) questioned whether the translation was correct, and suggested that the highest form of human achievement was the realisation of one's true potential. Empirical studies using psychometric measures such as the Life Satisfaction Index (LSI; Neugarten, Havighurst, & Tobin, 1961) were developed for gerontological research, but not for defining psychological wellbeing. Other measures were also not strongly guided by theory.

Theoretical perspectives such as Maslow's (1968) concept of self-actualisation and Rogers' (1961) humanistic theory also define aspects of the criteria for psychological health and wellbeing, however lack of valid measures and extensive criteria has made them difficult to use in research. Due to the convergence of many previous theories and descriptions of characteristics of psychological wellbeing, Ryff (1989) argued for a redefining of the 6 conceptual dimensions of wellbeing, guided by theory and integrating new assessment instruments.

To operationalise the new assessment, each dimension considers a different aspect of positive functioning and was used to develop a structured, self-report instrument to measure these constructs. The definitions for each dimension of wellbeing are listed in Table 1, presented in terms of scale being high versus low scorers. Each scale consisted of 32 items, 16 positive and 16 negative, where participants rate themselves for each item on a 6-point Likert scale ranging from strongly agree to strongly disagree. Comparative studies of intercorrelation

with other wellbeing measures, as well as age and sex differences, provided preliminary evidence for the validity of the new scale.

Table 1.

Definitions of Theory-Guided Dimensions of Wellbeing

Self-acceptance

High scorer: Possesses a positive attitude toward the self; acknowledges and accepts multiple aspects of self including good and bad qualities; feels positive about past life.

Low scorer: Feels dissatisfied with self; is disappointed with what has occurred in past life; is troubled about certain personal qualities; wishes to be different than what he or she is.

Positive relations with others

High scorer: Has warm, satisfying, trusting relationships with others; is concerned about the welfare of others; capable of strong empathy, affection, and intimacy; understands give and take of human relationships.

Low scorer: Has few close, trusting relationships with others; finds it difficult to be warm, open, and concerned about others; is isolated and frustrated in interpersonal relationships; not willing to make compromises to sustain important ties with others.

Autonomy

High scorer: Is self-determining and independent; able to resist social pressures to think and act in certain ways; regulates behaviour from within; evaluates self by personal standards.

Low scorer: Is concerned about the expectations and evaluations of others; relies on judgements of others to make important decisions; conforms to social pressures to think and act in certain ways.

Environmental mastery

High scorer: Has a sense of mastery and competence in managing the environment; controls complex array of external activities; makes effective use of surrounding opportunities; able to choose or create contexts suitable to personal needs and values.

Low scorer: Has difficulty managing everyday affairs; feels unable to change or improve surrounding context; is unaware of surrounding opportunities; lacks sense of control over external world.

Purpose in life

High scorer: Has goals in life and a sense of directedness; feels there is meaning to present and past life; holds beliefs that give life purpose; has aims and objectives for living.

Low scorer: Lacks a sense of meaning in life; has few goals or aims, lacks sense of direction; does not see purpose of past life; has no outlook or beliefs that give life meaning.

Personal growth

High scorer: Has a feeling of continued development; sees self as growing and expanding; is open to new experiences; has sense of realising his or her potential; sees improvement in self and behaviour over time; is changing in ways that reflect more self-knowledge and effectiveness.

Low scorer: Has a sense of personal stagnation; lacks sense of improvement or expansion over time; feels bored and uninterested in life; feels unable to develop new attitudes or behaviours.

(Ryff, C. D., 1989)