

The Medical Outcomes Study 36-item short-form health survey (SF-36)

Description

The SF-36 is the most widely used generic health survey for the general population. Its use has been documented in over 1000 publications (Ware 2000). The SF-36 has been used to describe the health status of individuals suffering from a wide range of general health, post-surgical, and musculoskeletal complaints.

The questions in the SF-36 are simple to understand and relevant to most people's lives. The SF-36 measures the following specific dimensions of health:

- Physical Function
- Role Physical
- Bodily Pain
- General Health
- Vitality
- Social Functioning
- Role Emotional
- Mental Health

These eight dimensions are also commonly combined to produce two summary measures: a Physical Component Summary (PCS) and a Mental Component Summary (MCS).

Instructions to the client and scoring: The SF-36 is a self-administered questionnaire. Subjects complete one response from a range of options for each of the 36 questions. A combination of item response(s) is then aggregated to calculate a score for each of the eight dimensions listed. The scores for each dimension range from 0 to 100, with higher scores indicating better health status. Bodily Pain is also scored in this way, with higher scores indicating less pain.

The two summary scales (PCS and MCS) are scored differently from the eight dimension scores. These scales are scored using norm-based methods. A score of 50 reflects an average score with respect to these populations. Scores lower than 50 reflect less than average health and scores greater than 50 reflect better than average health.

Reliability and validity: The SF-36 has been shown to have high internal consistency, reliability, and validity across both general populations and specific patient groups such as those with low back and neck pain (Ware 2000, McHorney et al 1994, McCallum 1995). Of interest to physiotherapists, the SF-36 has been shown to have similar responsiveness to neck-specific questionnaires such as the NDI and FRI (Jette and Jette 1996, Riddle and Stratford 1998, Stewart et al 2007) and back-specific questionnaires such as the Oswestry Disability Index (Walsh et al 2003)

Commentary

The SF-36 takes 5 to 10 minutes to complete. It provides a comprehensive measure of clinical outcome and is one of the few tools that take into account both physical and psychological aspects of health.

Possibly the main advantage of the SF-36 is its ability to provide a comparison of health status data across different patient groups with direct reference to the general population. The SF-36 also enables clinicians to identify coexisting problems, such as psychological problems which may have gone unrecognised with other assessment methods.

Unfortunately the requirement to use normative data makes scoring of the questionnaire by hand tedious and prone to error. (Scoring algorithms may be found in Ware et al 1994.) A more reliable option is computerised or on-line scoring using customised software which has a cost per use. A downside of this on-line system is the comparison of patient data to US norms. A scoring program utilising Australian normative data, Clinical Outcome Evaluation System, is also available. This is a simple and efficient tool, however

a licence must be purchased to make use of the software. Without customised software the SF-36 is unwieldy for clinicians to use with individual patients and hence has become primarily a tool for researchers.

The Physical Function scale, which may be important for musculoskeletal conditions, has been reported to be prone to 'floor and ceiling' effects, meaning that the scale is insensitive for those patients with very high or low levels of disability in performing physical activities (Davidson et al 2004).

Generally the questions are well understood. Australian populations may have difficulty with some of the terminology (eg, 'How much of the time during the past 4 weeks did you feel full of pep?') and references to distances in yards and miles. Some patients may also find some of the questions irrelevant to their particular situation.

Mark Stewart

Back Pain Research Group, The University of Sydney

References

- Davidson M et al (2004) *Spine* 29: 586–594.
- Jette DU and Jette AM (1996) *Phys Ther* 76: 930–941.
- McCallum J (1995) *Aust J Public Health* 19: 160–166.
- McHorney CA et al (1994) *Med Care* 32: 40–66.
- Riddle DL and Stratford PW (1998) *Phys Ther* 78: 951–963.
- Stewart M et al (2007) *Spine* 32: 580–585.
- Walsh TL et al (2003) *Spine* 28: 607–615.
- Ware JE (2000) *Spine* 25: 3130–3139.
- Ware JE et al (1994) SF-36 Physical and Mental Health Summary Scales: A User's Manual. Boston, MA: Health Assessment Lab.

Websites

- www.sf-36.org [Accessed 17 July 2007]
- www.repat.com.au/media/systems/coes [Accessed 17 July 2007]