

A Scale for the Assessment of Hedonic Tone The Snaith–Hamilton Pleasure Scale

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Background. Hedonic tone and its absence, anhedonia, are important in psychopathological research, but instruments for their assessment are lengthy and probably culturally biased.

Method. A new scale was constructed from the responses of a large sample of the general population to a request to list six situations which afforded pleasure. The most frequent items were reviewed and those likely to be affected by cultural setting, age, or sex were removed. A pilot study led to an abbreviated scale of 14 items, covering four domains of pleasure response. This questionnaire was subjected to psychometric evaluation in new samples from the general population and psychiatric patients.

Results. The scale was found to have a score range that would distinguish a 'normal' from an 'abnormal' response. Validity and reliability were found to be satisfactory.

Conclusions. The new scale, the Snaith–Hamilton Pleasure Scale (SHAPS), is an instrument which may be recommended for psychopathological research.

The role of hedonic tone, that is, the ability to experience pleasure, has attracted attention in the study of psychopathology (Loas & Piersen, 1989). In the present century, the significance of hedonic tone had been eclipsed (Snaith, 1993), but attention to it was revived by a study (Klein, 1974) which proposed that low hedonic tone is a central feature of a type of mood disorder which is likely to respond to antidepressant medication. An alternative view had been proposed (Meehl, 1962), which considered that low hedonic tone is a personality trait predisposing to the development of schizophrenia and depressive disorder. Interest in the significance of the state was increased by its inclusion as one of the central features of major depressive disorder in DSM–III–R (American Psychiatric Association, 1987).

The significance of hedonic tone requires further clarification. For this to occur there must be precise definition and the provision of accurate methods for screening and assessment. Several 'pleasure' scales exist, the best known of which are those of Fawcett *et al* (1983) and Chapman *et al* (1976). There is also a pleasure scale for children (Kazdin, 1989). Problems with these scales arise from their length and probable cultural bias: for instance, items include such statements as "Poets always exaggerate the beauties of nature" (Chapman), "While fishing you feel a tug on your line and watch a six-pound fish jump out of the water with your bait in its mouth", "Your neighbours rave about the way you keep up your house and yard" (Fawcett), "Your teacher makes you the King/Queen for the day (Kazdin).

There is a need for a simpler scale, unlikely to be affected by social class, sex, age, dietary habits and nationality. It should be capable of ready translation into other languages. Since it will be a self-assessment scale the statements must be simple and easy to understand. The scale should cover a wide range of domains of pleasure.

The construction of such a pleasure scale was the purpose of this study.

Method

Selection of items

In order to obtain a representative sample of items, 100 members of the general public were asked to submit a list of five situations which caused them pleasure. They were informed of the purpose of the study and asked to avoid items which were unlikely to be applicable to most people, for example a particular sporting activity, alcoholic drinks, sexual activity, and particular articles of diet. The respondents were of both sexes, of age range 15–80 years, and from a wide range of social class. Fifty-five replies were returned, and from these a provisional list of 20 items was drawn up. The items covered the domains of social interaction, food and drink, sensory experiences, achievement, and pastimes. Subjects were instructed to indicate the degree to which each item caused them pleasure on a four-point scale; in order to avoid response set, some items were phrased in negative terms.

This questionnaire was given to a number of people from the general population and some

psychiatric patients. It became clear that the negative wording caused confusion, so these items were deleted; the problem of response set was overcome by varying the order of responses. The resulting 14-item scale appears in the Appendix. Instead of using a Likert-style scoring device, it was decided to adopt the simpler method, used in the General Health Questionnaire (GHQ), in which either of the 'Disagree' responses scores 1 point and either of the 'Agree' responses scores 0 points. Thus, the score range is 0–14.

Establishment of the revised scale

This was undertaken among members of the general public and selected psychiatric in-patients.

The sample from the general public was composed of 102 members of staff, students and hospital visitors. It was important to establish scores on an emotionally healthy sample, so the GHQ-30 (Goldberg, 1972) was also administered and the responses of those scoring over 4 on the GHQ were discarded, reducing the sample to 82. For the purpose of a retest reliability estimate, 30 respondents repeated the questionnaire after a few days, without sight of the previous record. The sample was approximately equally divided between men and women, covered the range of social class, and had an age range of 20–80 years.

Since the purpose of the study was to establish scale scores for hedonic tone, clinicians were asked to put forward names of patients who clearly suffered from a defect of this state and who were willing and capable of completing a self-assessment scale. The majority, but not all, of the patients suffered from a major depressive illness. Forty-six participated (18 men:28 women range 17–81). Those patients who during the study had undergone considerable improvement in their clinical state

were asked to repeat the ratings, and 30 patients did so.

The patients were assessed by pairs of raters using the Montgomery-Åsberg (1979), not to provide an overall depression score, but because the set of 10 constructs on the MADRS, all rated on six-point scales, includes an 'Inability to feel' item. The researchers were instructed to use this item to assess hedonic tone, which is probably the manner for its use in routine application of the MADRS. By summing the scores of the two raters, scales (0–12) of relevant psychopathological constructs were produced: depressed mood, depressed appearance, inner tension, appetite, sleep, lassitude, ability to concentrate, suicidal preoccupation, pessimism, and hedonic tone. Raters remained blind to the patients' completion of the pleasure scale.

Statistics

Non-parametric statistics were used including, for the measures of correlation, the Spearman rank method. A level of 1 in 50 ($P < 0.02$) was accepted as indicating statistical significance.

Results

Validity

The *face validity* of the pleasure scale rests upon the wording of its items. The *content validity* is based on its coverage of a range of domains of pleasure. The distribution of the scale scores is shown in Table 1.

Few respondents in the general public scored over 2, whereas the majority of patients with reduced hedonic tone scored more than 2. Inspection of the items which were sometimes selected by members of

Table 1
Distribution of scores in samples

	Score														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
General population															
aged under 60: men	25	1	3	1	-	-	-	-	-	-	-	-	-	-	-
aged under 60: women	27	4	1	1	-	-	1	-	-	-	-	-	-	-	-
aged over 60: men	8	-	1	1	-	-	-	-	-	-	-	-	-	-	-
aged over 60: women	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	68	5	5	3	-	-	1	-	-	-	-	-	-	-	-
General population scoring > 4 on GHQ	12	7	-	1	1	1	-	-	-	-	-	-	-	-	-
Psychiatric patients															
first rating	2	-	3	3	3	2	6	3	6	2	1	3	6	3	-
repeat rating	19	2	3	-	2	2	-	1	-	-	-	1	-	-	-

the general population as failing to elicit a pleasure response did not reveal a preponderance of any item. No sex difference was apparent in responses to the items.

Criterion validity (i.e. that the scale is a preferential measure of hedonic tone rather than some other construct) is indicated by the following correlations with the MADRS item ratings: hedonic tone +0.36 ($P < 0.02$), suicidal preoccupation +0.38 ($P < 0.02$), anxiety +0.34 (NS), depressed mood -0.04 (NS), lassitude +0.08 (NS), appetite +0.10 (NS), sleep +0.01 (NS), and pessimism +0.27 (NS). The rating of suicidal preoccupation probably represents a measure of overall severity of illness and thus the significant correlation is explained; the borderline significance of the correlation with anxiety is interesting and requires confirmation in a different sample and setting. The absence of a significant association with depressed mood was somewhat surprising but supports the view that depressed mood and low hedonic tone are different constructs. The receiver operating characteristics (ROC) (Fig. 1) show the performance of the scale at different cut-off points against two levels of diminished hedonic tone: (a) 'perceptible' (rating over 2 on the MADRS item), (b) 'clinically significant' (rating over 4 on the MADRS item). The ROC are satisfactory at both levels, with a confirmation that a cut-off score of

2 provides the best discrimination between 'normal' and 'abnormal' level of hedonic tone.

The *utility* of a scale refers to the ease of administration and acceptance by the population for which it is designed. No respondents expressed difficulty in comprehension of the scale or returned incomplete forms.

The sensitivity to change of clinical status was examined by inspection of the ratings of those patients who had repeat ratings of normal hedonic tone. At initial rating, the median score was 5 (range 0-13); the median score on repeat test was 0 (range 0-2). The significance of the change (McNemar $\chi^2 = 18.05$, $P < 0.001$) indicates that the scale is sensitive to change in clinical status of hedonic tone.

Scores on a mental state measure should vary according to clinical status. Therefore the test-retest procedure to establish reliability in the patient sample is not possible since clinical status may change over a few days. Therefore this aspect of reliability was tested by inspection of the scores of members of the general population who repeated the scale after several days: of the 30 respondents only two recorded a 'normal' (2 or less) score on one occasion and an 'abnormal' (>2) score on the other occasion. The split-half correlation in the sample of patients (first seven with second seven items) was significant ($r = 0.74$, $P < 0.01$). The estimation of internal consistency of the scale was estimated by the Kuder-Richardson formula applicable to non-parametric data (Guilford, 1954) (comparable to the Cronbach method): for the sample of patients this figure was 0.857, which shows satisfactory internal consistency.

Relationship of the scale scores with age revealed no significance in either sample.

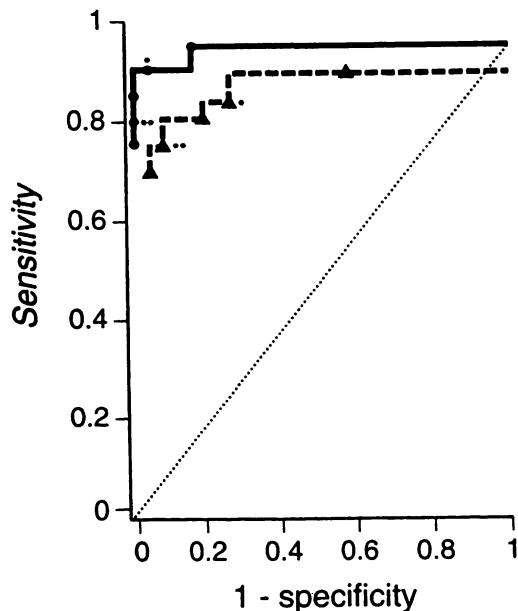


Fig. 1 Receiver operating characteristics (ROC) of the SHAPS at two levels of diminished hedonic tone (cut-off point of 2/3, ● and ▲; cut-off point of 4/5, --▲-- and **).

Discussion

The study presents a brief assessment scale, to be called the Snaith-Hamilton Pleasure Scale (SHAPS), for estimation of the degree to which a person is able to experience pleasure or the anticipation of a pleasurable experience. The items relate to experiences likely to be encountered by most people. It is thought that translation into other languages for use in different cultural settings will not affect the validity of the SHAPS, although this remains to be established. The phrasing of the items is expected to overcome the difficulty when a subject is not able to experience the situation currently. There is one circumstance for which the SHAPS would not be valid, and this is its use with blind people, since four of the items depend upon visual experience. The effect of removal of the items and use of a partial scale cannot yet be recommended but may prove to be valid.

The SHAPS covers four domains of hedonic experience: interest/pastimes, social interaction, sensory experience, and food/drink. Each of these is based on only a few items and it is not at present recommended that subscores indicating these domains should be used. Further study is now required, but it is likely that the SHAPS will prove to be a valid measure of hedonic tone.

It should be noted that children's scores remain to be established, but for adolescents and adult age and sex have no major effect on scores.

Performance of the SHAPS among physically ill people must be established; the ability to experience pleasure is certainly an important aspect of the concept of 'quality of life'; the relation of scores to more general measures of this concept will be an important area of study and possible application for the scale. Hedonic tone is certainly an important aspect of many aspects of psychiatric disorders. It may be that hedonic tone provides an important link construct between depressive illness and such states as obsessional disorders; Andreasen (1982) recognised lowered hedonic tone to be one of the components of the 'negative' phase of schizophrenia. The SHAPS may therefore be of aid in unravelling interconnections between different psychiatric disorders. Further progress in research into psychiatric disorder will certainly be aided by more accurate definition and measurement of psychopathological concepts as well as by the redefinition of diagnostic categories based upon combinations of symptoms (Birley, 1990; Van Praag, 1992; Costello, 1992).

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Appendix. This scale may be reproduced under its proper title for personal use and research. Reproduction in any book or manual or for commercial purpose must be negotiated with the *British Journal of Psychiatry*.

This questionnaire is designed to measure your ability to experience pleasure *in the last few days*.

It is important to read each statement very *carefully*.

Tick *one* of the boxes [] to indicate how much you agree or disagree with each statement.

1. I would enjoy my favourite television or radio programme:

Strongly disagree []
Disagree []
Agree []
Strongly agree []

2. I would enjoy being with my family or close friends:

Definitely agree []
Agree []
Disagree []
Strongly disagree []

3. I would find pleasure in my hobbies and pastimes:

Strongly disagree []
Disagree []
Agree []
Strongly agree []

4. I would be able to enjoy my favourite meal:

Definitely agree []
Agree []
Disagree []
Strongly disagree []

5. I would enjoy a warm bath or refreshing shower:

Definitely agree []
Agree []
Disagree []
Strongly disagree []

6. I would find pleasure in the scent of flowers or the smell of a fresh sea breeze or freshly baked bread:

Strongly disagree []
Disagree []
Agree []
Strongly agree []

7. I would enjoy seeing other people's smiling faces:

Definitely agree []
Agree []
Disagree []
Strongly disagree []

8. I would enjoy looking smart when I have made an effort with my appearance:

Strongly disagree []
Disagree []
Agree []
Strongly agree []

9. I would enjoy reading a book, magazine or newspaper:

Definitely agree []
Agree []
Disagree []
Strongly disagree []

10. I would enjoy a cup of tea or coffee or my favourite drink:

Strongly disagree []
Disagree []
Agree []
Strongly agree []

11. I would find pleasure in small things, e.g. bright sunny day, a telephone call from a friend:

- Strongly disagree []
 Disagree []
 Agree []
 Strongly disagree []

12. I would be able to enjoy a beautiful landscape or view:

- Definitely agree []
 Agree []
 Disagree []
 Strongly disagree []

13. I would get pleasure from helping others:

- Strongly disagree []
 Disagree []
 Agree []
 Strongly agree []

14. I would feel pleasure when I receive praise from other people:

- Definitely agree []
 Agree []
 Disagree []
 Strongly disagree []

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