

Summary of CARIAD measures

The Positive and Negative Affect Schedule PANAS

Watson, D., Clarke, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS Scales. *Journal of personality and social psychology*, 54, 1063-70.

The Positive and Negative Affect Schedule (PANAS) was developed by Watson et al. as a brief measure of dimensions of mood and overall positive and negative affect (scored by adding relevant item scores). The PANAS consists of 20 adjectives used to describe different feelings and emotions. In the current study, at each time-point the PANAS will be anchored to “*how you have felt in the last week*”. The PANAS has been used to measure dimensions of positive and negative emotions across a variety of health situations.

PA: the extent to which a person feels enthusiastic, active and alert. A person high on PA will be in a state of high energy, full concentration, and pleasurable engagement.

NA: the extent to which a person feels a range of aversive mood states and subjective distress. A person high in NA will experience anger, contempt, disgust, fear, nervousness. Low levels of NA reflect calmness and serenity.

Trait PA and Trait NA correspond roughly to extraversion and neuroticism. We are using it as a STATE measure.

Scoring:

Scores for each scale are derived by adding item scores (1-5) for the ten PA adjectives for the PA scale and for the ten NA adjectives for the NA scale.

Total NA and PA scores therefore range from 10 to 50.

High scores indicate high levels of positive or negative affect.

References

- Watson, D; Clarke, L A & Tellegen, A (1988). Development and validation of brief measures of positive and negative affect: the PANAS Scales. *Journal of personality and social psychology*, 54, 1063-70.
- Watson, D & Pennebaker, J W (1989). Health complaints, stress and distress: exploring the central role of negative affectivity. *Psychological Review*, 96, 234-54.
- Voogt, E; Vander Der Heide, A; Van Leuwen AF et al. (2004) Positive and negative affect after diagnosis of advanced cancer. *Psycho-oncology*, 14, 262-273

Norms/Data from PANAS

Voogt et al: PA: 22.7; NA 17.6

Watson et al. 1988 Norms for over past few weeks: PA: 32; NA 19.5

The Impact of Event Scale (IES)

Horowitz, M., Wilner, N., & Alvarez, W. (1979). Impact of Event Scale: a measure of subjective stress. *Psychosomatic Medicine* 1979; 41: 209 – 218.

Variable: Stress reactions after a specific traumatic event

The IES is based on a two-factor “intrusion-avoidance” model of reactions to stressful life events. Items for the IES were developed from statements most frequently used to describe episodes of distress by those who had experienced a recent stressful life event (Horowitz et al., 1979). It measures the frequency of intrusive and avoidant phenomena. Intrusions are characterised by “unbidden thoughts and images, troubled dreams, strong pangs or waves of feelings, and repetitive behaviour. Avoidance responses are characterised by “ideational constriction, denial of the meaning and consequences of the event, blunted sensation and behavioural inhibition or counter phobic activity, and awareness of emotional numbness”.

The IES is considered to have good internal consistency. Sundin & Horowitz (2002) reported mean Cronbach’s alpha coefficients across 18 studies of 0.86 for intrusion and 0.82 for avoidance. The IES has been used as a measure of cancer-specific distress in a number of studies within the psychosocial cancer genetics literature (e.g., Lloyd et al., 1996; Zakowski et al., 1997; Kent et al., 2000). Thewes et al. (2001) reported that the IES has good internal consistency and test re-test reliability amongst women at increased risk of breast cancer.

Reliability: Horowitz et al. (1979) reported satisfactory internal consistency - Cronbach’s alpha = 0.86 for the total IES, 0.78 for intrusion, and 0.82 for avoidance. Thewes et al. (2001) examined the psychometric properties of the IES amongst women at increased risk for hereditary breast cancer, and internal consistency coefficients were found to be uniformly high - Cronbach’s alpha = 0.91 for the total IES, 0.88 for intrusion, and 0.84 for avoidance.

Horowitz et al. (1979) report a test-retest reliability of $r = 0.89$ for intrusion and $r = 0.79$ for avoidance, over 1 week. Thewes et al. (2001) examined test-retest reliability over 14 days and the correlation coefficients were $r = 0.75$ for intrusion, $r = 0.78$ for avoidance, and $r = 0.80$ for the total IES.

Validity: Face validity: Thewes et al. (2001), through a qualitative analysis of participants’ responses, found that the majority of their participants believed that the IES measured anxiety, worry or emotional wellbeing. Whilst some believed it was not directly relevant to them, the majority of women thought that the scale was relevant to women with a family history of breast cancer. Some women, however, felt that the response options available were inappropriate if they had not thought about breast cancer at all. Lloyd et al. (1996) included an “opt out” box for participants to tick if they had not thought about breast cancer at all in the past week. Thewes et al. (2001) support the continued use of this strategy.

Construct validity: Factor structure of the IES. The two-factor (Intrusion and Avoidance) factor structure originally reported by Horowitz et al. (1979) was replicated by Thewes et al. (2001) using a principal components factor analysis technique. With the exception of Item 12, the two-factor solution accounted coherently for factor loadings. Item 12 was found to load on both factor solutions. These findings suggest that this item might tap into both constructs in this particular

population, and that it may be prudent to discard the item in future studies involving women at high risk of developing breast cancer.

Discriminative validity: Thewes et al. (2001) examined correlations between scores on the IES and a number of other standardised measures of psychological distress.

Correlations between the IES and other measures of generalised / current psychological distress (BDI, STAI, GHQ-28) were found to be lower than correlations between the three measures of generalised distress, which suggests that the IES measures a construct which is at least partially distinct from generalised / current psychological distress.

Convergent validity: Thewes et al. (2001) found significant correlation between breast cancer-related events and attitudes and scores on the IES. This provides evidence for the convergent validity of the IES as a measure of cancer-specific anxiety.

Scoring:

The scale consists of 15 items (seven intrusion items and eight avoidance items).

Participants rate the frequency of intrusive and avoidant cognitions and behaviours using a four-point frequency scale (0=Not at all; 1=Rarely; 3=Sometimes; 5=Often).

The IES allows the calculation of a total score (with a possible range of 0 – 75) and separate intrusion and avoidance subscales scores (with a possible range of 0 –35 and 0 –40, respectively).

According to Horowitz (Horowitz (1982) and personal communication, 1999; 2004), scores on the global IES can be broken down into the following categories: low distress (scores below 8.5), medium distress (scores between 8.5 and 18) and high distress (scores of 19 or more).

Examples of items on the intrusion sub-scale include:

I thought about it when I didn't want to
I had waves of strong feelings about it
Pictures of it popped into my mind

The avoidance sub-scale measures the frequency of avoidance of these intrusive thoughts and consisted of eight items on the same four-point scale (1 = not at all; 2 = rarely; 3 = sometimes; 4= often).

Examples of items on the avoidance sub-scale include:

I tried not to think about it
I stayed away from reminders of it
I avoided letting myself get upset when I thought about it

In order to analyse the data from the IES, the raw scores are recoded as follows: 1=0; 2=1; 3=3; 4=5.

References: Horowitz M. Stress response syndromes and their treatment. In L. Goldberger & S. Breznitz (Eds.) *Handbook of stress: Theoretical and clinical aspects* (pp. 711 – 732). New York: Free Press, 1982.

Thewes B, Meiser B, Hickie I B. Psychometric properties of the Impact of Event Scale amongst women at increased risk of hereditary breast cancer. *Psycho-Oncology* 2001;10: 459 – 468.

Life Orientation Test LOT

The two-item short form of the Life Orientation Test will be used at this time-point only to measure dispositional optimism. The LOT shows good internal consistency and test-retest reliability and this short version of the LOT has been used previously to measure this trait amongst individuals undergoing genetic testing.

The Life Orientation Test (LOT) was developed to assess individual differences in generalized optimism versus pessimism. This measure has been used in a good deal of research on the behavioral, affective, and health consequences of this personality variable. Although the LOT was widely used, it had some problems. Most important, its original items did not all focus as explicitly on expectations for the future as theory dictated. In part to remedy this deficiency, Scheier et al. developed a revision of the LOT, called LOT-R.

LOT-R

Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect" answers. Answer according to your own feelings, rather than how you think "most people" would answer.

- A = I agree a lot
- B = I agree a little
- C = I neither agree nor disagree
- D = I DISagree a little
- E = I DISagree a lot

1. In uncertain times, I usually expect the best.
- [2. It's easy for me to relax.]
3. If something can go wrong for me, it will.
4. I'm always optimistic about my future.
- [5. I enjoy my friends a lot.]
- [6. It's important for me to keep busy.]
7. I hardly ever expect things to go my way.
- [8. I don't get upset too easily.]
9. I rarely count on good things happening to me.
10. Overall, I expect more good things to happen to me than bad.

Scoring:

If calculating a total LOT score (not split by optimism/pessimism):-

- Need to reverse score the three items measuring pessimism i.e. lot3, lot7 & lot9
- Reverse score: (1=5) (2=4) (3=3) (4=2) (5=1)
- For remaining items no recoding of variables necessary BUT remember that items 2, 5, 6 & 8 fillers so do not enter these variables into any syntax for the LOT Scale(s).
- High scores indicate high optimism. Possible scale range of 10-50

If calculating separate scales for optimism and pessimism:-

Pessimism sub-scale

Sum original LOT pessimism items i.e. lot3, lot7 & lot9

Optimism sub-scale

Sum following items: lot1, lot4 and lot 10

References

Scheier, M. F., & Carver, C. S. (1992). Effects of optimism on psychological and physical well-being: Theoretical overview and empirical update. *Cognitive Therapy and Research*, 16, 201-228.

Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A re-evaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*, 67, 1063-1078.