

06

## The psychological impact of negative TV news bulletins: The catastrophizing of personal worries

Wendy M. Johnston and Graham C. L. Davey\*

*Psychology Group, School of Cognitive & Computing Science, The University of Sussex,  
Falmer, Brighton BN1 9QH, UK*

This study investigated the effect of the emotional content of television news programmes on mood state and the catastrophizing of personal worries. Three groups were shown 14-min TV news bulletins that were edited to display either positive-, neutral- or negative-valenced material. Participants who watched the negatively valenced bulletin showed increases in both anxious and sad mood, and also showed a significant increase in the tendency to catastrophize a personal worry. The results are consistent with those theories of worry that implicate negative mood as a causal factor in facilitating worrisome thought. They also suggest that negatively valenced TV news programmes can exacerbate a range of personal concerns that are not specifically relevant to the content of the programme.

There are a number of everyday events in the lives of ordinary individuals which can have a regular and important impact on their moods and, as a consequence, their psychological health. One such example is the emotional content of films and television programmes. This can provoke marked changes in mood at the subjective, expressive and physiological levels (Averill, 1969; McHugo, Smith & Lanzetta, 1982; Scott, 1930; Sternbach, 1962), and, depending on content, can produce differential emotions in a predictable way (Philippot, 1993). Arguably of most concern to psychologists is the effect of films and TV programmes which induce negative emotions such as anxiety and depression. Not only do they elicit emotional discomfort *per se*, but such moods may also facilitate the occurrence of other psychologically undesirable processes which have a detrimental effect on psychological health in general.

For instance, anxious and depressed moods are known to generate information-processing biases which favour the processing of threatening or negative material. First, anxious mood generates a predisposition to selectively attend to threatening material (Mathews, 1990; Wells, 1994), and especially to material which matches current worry topics (e.g. Mogg, Mathews & Eysenck, 1992). Secondly, negative mood states (especially depression) may facilitate the accessing of memories which are congruent with such mood states (i.e. negative or threatening memories) (Blaney, 1986; Mathews & MacLeod, 1994).

\* Requests for reprints.

Some theorists have argued that these mood-congruent information-processing biases are a causal factor in chronic or pathological worrying (e.g. Mathews, 1990; Wells, 1994). First, the attentional bias to threatening material caused by anxious mood may prioritize the processing of information relevant to current concerns (Mogg *et al.*, 1992) and precipitate worrying on a regular basis. Second, negative mood such as depression has been hypothesized to facilitate the accessing of negative information in memory. This can generate a number of phenomena characteristic of worrying such as an excess of negative cognitions (Borkovec, Robinson, Pruzinsky & Dupree, 1983; York, Borkovec, Vasey & Stern, 1987), the facilitated accessing of reasons why negative events might occur (MacLeod, Williams & Bekerian, 1991), and the tendency to catastrophize threats (Vasey & Borkovec, 1993).

The present study is designed to investigate whether the negative emotional content of television programmes precipitates catastrophic worrying in the way predicted by mood-congruent theories of worrying. One issue of contemporary relevance here is the emotional valence of TV news programmes. It has been suggested that many TV news programmes concentrate on negative rather than positive news and risk 'being dragged into a whirlpool of negativity and trivia' (Lewis, 1994). One reason proposed for this emphasis on negatively valenced news is that news programmes now have to compete with entertainment programmes for their audience, and do so by emphasizing emotionally relevant material such as crime, war, famine, etc., at the expense of more positive material (*The Guardian*, 16 November, 1993). While the debate on this matter has centred around whether audiences get a balanced view of the world when an emotionally negative slant is given to news, there remains the issue of what kinds of effects such negatively biased programmes might have on the daily lives of viewers themselves. The present study will look at the effects that artificially constructed positive and negative news bulletins have on mood state and the effect that these mood changes have on the individual's perception of their own personal problems.

## Method

### *Participants*

A total of 30 participants took part in the study, all of whom were undergraduate students at City University. Their ages ranged from 18 to 26 years, with a mean age of 23 years; 15 were female and 15 male. All participants were volunteers and were paid a small fee for their participation.

### *Procedure*

*Construction of positive, negative and neutral news videos.* Three videotapes were constructed, each consisting of 14 min of edited television news items. Each tape contained items relevant to one of three conditions: positive, neutral or negative. In order to construct the videos, a number of news items were selected and shown to four independent raters in order to obtain an objective and independent evaluation of the valence of each item. The raters were two males and two females aged 19 to 21 years. After watching each news item, the raters were asked to rate each item on three 100-point analogue scales. These scales assessed each news item along dimensions of (1) positive/negative, (2) pleasant/unpleasant, and (3) calm/excited. Three 14 min videotapes were then compiled consisting of items that were respectively rated as positive, neutral and negative. Each tape contained seven news items edited together to form

what appeared to be a single news programme. Each tape also contained an equal number of national and regional news items, and individual items on each tape were matched for duration. All tapes differed significantly from each other on measures of positive/negative and pleasant/unpleasant ( $t$  test, all  $ps < .05$ ), and the negative tape was rated significantly more exciting than both the positive and neutral tapes ( $p < .05$ ). There was no significant difference between positive and neutral tapes on this last scale ( $p > .1$ ). Finally, because individual tapes were made up of items presented by more than one newsreader, the independent raters were also asked to rate each newsreader on the three scales. This revealed no significant differences on any of the scales between the four newsreaders used. Thus, differences in valence assigned to the three tapes was a reflection of the content of the tape rather than the characteristics of the individual newsreaders.

*Experimental procedure.* Participants were assigned randomly to one of three groups. These groups were labelled Positive ( $N = 10$ ), Neutral ( $N = 10$ ), and Negative ( $N = 10$ ) depending on the valency of the video news tape that they were to watch. Each group contained five males and five females. Participants were tested individually in a small room containing a tape-recorder and a video-unit. They were instructed that they would have to fill in a number of questionnaires, watch a videotape containing news items, and then talk briefly about their current personal anxieties and worries. Participants then completed an informed consent form and also completed the Spielberger STAI Y-2 (Spielberger, 1983), the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock & Erbaugh, 1961) and the Penn State Worry Questionnaire (Meyer, Miller, Metzger & Borkovec, 1990) as measures of trait anxiety, depression and pathological worrying respectively.

Before watching the news video appropriate to their group, participants were requested to write down their three main current worries in order of importance and were told that they would be asked some questions about these at a later date. Then participants rated their current levels of anxiety and sadness on two separate 100-point analogue scales (where 0 = not at all anxious/sad, 100 = extremely anxious/sad). They then watched the news video appropriate to their group, but were informed prior to watching it that they would not subsequently be tested in any way on the content of the tape. After watching the video, participants filled in the anxious and sadness scales for a second time.

Participants were then told that they were going to be asked some questions about one of their worries, and that their responses would be tape-recorded. It was stressed that the tape-recording of responses was purely for the purposes of collating the data, and that each participant's responses would remain anonymous and the tapes would be erased when the data had been collated. The experimenter then selected the worry listed as the most prominent by the participant, and this was then the object of a catastrophizing interview technique.

The catastrophizing interview technique allows an assessment of a worry in terms of the number of bad outcomes associated with the problem, and the tendency to define a potential problem as getting worse and worse (Kendall & Ingram, 1987; Vasey & Borkovec, 1993). As such it gives an objective measure of both the depth of a worry (in terms of how bad the potential outcomes of the problem are perceived) and the amount of time an individual is willing to spend ruminating on a particular worry (in terms of the number of catastrophizing steps the participant is willing to articulate).

The catastrophizing interview begins with the experimenter asking the question 'What is it that worries you about ( $X$ )?', where  $X$  is the subject's main worry topic. The experimenter then repeats this question but substituting the participant's answer to the first question for  $X$ . For example, if the participant's main worry is exams, the first question will be 'What is it that worries you about exams?' If the participant replies 'Because I might fail them', the experimenter then asks 'What is it that worries you about failing exams?' If the participant replies 'I won't get a good job', the experimenter then asks 'What is it that worries you about not getting a good job?', and so on. This standardized form of questioning was adopted throughout the catastrophizing interview to avoid any experimenter bias in the way that questions were worded. The catastrophizing interview was terminated when any one of three criteria was met: (1) the participant could not give any further answers, (2) the participant repeated the same answer three times, or (3) the participant showed unwillingness or refused to continue with the catastrophizing process (cf. Vasey & Borkovec, 1992). The dependent variable is the number of catastrophizing steps that the participant goes through before one of these three criteria is met. After the study was completed, the tape-recordings of the catastrophizing interviews were given to an independent rater who was blind to the experimental conditions experienced by the participants. The

rater was asked to give an independent assessment of the number of catastrophizing steps for each participant. This independent rater's assessment correlated ( $r = .998, p < .01$ ) with that of the experimenter.

When the interview was completed, participants were asked to provide an estimate of how frequently they watched TV news each week. Due to the possible emotionally disturbing nature of the negative tape, participants in this group were asked to listen to two minutes of a relaxation tape on a personal stereo before leaving. All participants were then debriefed and paid.

## Results

### Questionnaires

There were no significant differences between groups on pre-experimental measures of trait anxiety (STAI Y-2), depression (BDI) or pathological worrying (PSWQ) (all  $F$ s  $< 1$ ). There was also no significant difference between groups on their reported frequency of watching news on television ( $F < 1$ ).

### Mood measures

Table 1 shows the mean anxiety and sadness ratings for all three groups both before and after watching their news video, and also gives an indication of effect size using Cohen's  $d$  (Cohen, 1977). These were subjected to a group (Positive vs. Neutral vs. Negative)  $\times$  rating (pre-video vs. post-video) analysis of variance. Anxiety ratings exhibited a significant group  $\times$  rating interaction ( $F(2, 27) = 3.85, p < .05$ ). This was manifested as no significant difference between groups on the pre-video measure ( $F < 1$ ), but a significant effect of group on the post-video measure ( $F(2, 27) = 5.66, p < .01$ ). Pairwise comparisons showed that group Negative were significantly more anxious than groups Positive and Neutral (Tukey's  $Q$ , all  $p$ s  $< .05$ ). Within-group comparisons showed no significant change in anxiety ratings between anxiety 1 and anxiety 2 for groups Positive and Neutral (all  $t$ s  $< 1$ ), and a marginally significant increase in anxiety ratings for group Negative ( $t(9) = 1.93, p < .1$ ).

**Table 1.** Mean anxiety and sadness ratings taken before and after viewing the videotape with Cohen's  $d$  as a measure of effect sizes (SD in parentheses)

|          | Anxiety 1<br>(prior<br>video) | Anxiety 2<br>(post-<br>video) | Cohen's $d$ | Sadness 1<br>(prior<br>video) | Sadness 2<br>(post-<br>video) | Cohen's $d$ |
|----------|-------------------------------|-------------------------------|-------------|-------------------------------|-------------------------------|-------------|
| Positive | 18.9<br>(17.7)                | 19.7<br>(17.8)                | 0.07        | 20.5<br>(22.0)                | 12.7<br>(14.2)                | 0.41        |
| Neutral  | 14.2<br>(12.2)                | 14.2<br>(11.7)                | 0.00        | 10.4<br>(10.1)                | 7.5<br>(8.2)                  | 0.48        |
| Negative | 26.8<br>(17.7)                | 43.9<br>(29.3)                | -0.57       | 17.4<br>(20.8)                | 43.2<br>(25.5)                | 1.17        |

Note. 0 = I do not feel at all anxious/sad; 100 = I feel extremely anxious/sad.

Sadness ratings also exhibited a significant group  $\times$  rating interaction ( $F(2, 27) = 11.16, p < .001$ ). There were no significant differences between groups on the pre-video ratings, but a significant effect of group on the post-video ratings ( $F(2, 27) = 12.06, p < .0005$ ). Pairwise comparisons revealed that group Negative gave significantly higher sadness ratings than both groups Positive and Neutral (Tukey's  $Q, ps < .05$ ). Within-group comparisons showed no significant change in sadness ratings between sadness 1 and sadness 2 for groups Positive and Neutral (all  $ts < 1$ ), but a significant increase in sadness ratings for group Negative ( $t(9) = 3.69, p < .01$ ).

### *Catastrophizing steps*

Table 2 shows the mean number of catastrophizing steps recorded for each group. This exhibited a significant effect of group ( $F(2, 27) = 5.15, p < .05$ ), in which group Negative emitted significantly more catastrophizing steps than both groups Positive and Neutral (Tukey's  $Q$ , all  $ps < .05$ ). There was no significant difference between groups Positive and Neutral.

**Table 2.** Mean number of catastrophizing steps for all three groups (SD in parentheses)

|                 | Positive      | Neutral       | Negative      |
|-----------------|---------------|---------------|---------------|
| Number of steps | 3.8<br>(1.98) | 3.6<br>(1.89) | 6.2<br>(2.14) |

A content analysis of worries that were catastrophized by participants in the experiment indicated that all 30 worries could be subsumed under one of three headings: (1) academic worries (e.g. exams), (2) personal relationship worries (with partners, family or friends), or (3) personal financial concerns. No participant catastrophized a worry based on the material they had seen previously in their news video.

### **Discussion**

The results of this study show that watching a predominately negatively valenced news programme raised self-reported measures of anxious and sad mood, and subsequently led to the enhanced catastrophizing of personal worries.

These findings suggest that TV and film material can provoke marked changes in mood, and can be easily adapted as a way of experimentally generating negative mood (Gerrards-Hesse, Spies & Hesse, 1994; Philippot, 1993). What is of additional importance is that increases in negative mood as a result of viewing a negatively valenced news bulletin were also associated with increases in the catastrophizing of personal worries. This is consistent with those theories of worry that implicate negative mood as a causal factor in facilitating worrisome thought (e.g. MacLeod *et*

al., 1991; Mathews, 1990; Vasey & Borkovec, 1992; Wells, 1994). Although there are many studies that have demonstrated a significant relationship between levels of negative mood (both anxiety and depression) and frequency of worrying (e.g. Davey, Hampton, Farrell & Davidson, 1992; Meyer *et al.*, 1990; Metzger, Miller, Chen, Sofka & Borkovec, 1990), the present study suggests that inducing negative mood can have a causal influence on worrying and facilitate worrisome thought independently of trait measures of anxiety and depression. How negative mood facilitates catastrophizing is not immediately clear, although mood-congruent recall of negative information in memory is one possibility (Blaney, 1986). For instance, Vasey & Borkovec (1992) have suggested that the difference in degree of catastrophizing in worriers and non-worriers may reflect the former's increased ability to access memory stores containing answers to the catastrophic 'What if...?' question. If this is so, then it is possible that negative mood alone is sufficient to facilitate recall of such material and thus maintain catastrophizing sequences.

Finally, the results also have important implications for the effects of negatively valenced news bulletins and TV programmes. Not only are such programmes likely to adversely affect mood, but they are also likely to exacerbate an individual's personal worries and anxieties. Intuitively, one might expect that news items reflecting war, famine and poverty might induce viewers to ruminate on such topics. However, the effect of negatively valenced news appears to be much broader than that—it can exacerbate a range of personal concerns not specifically relevant to the content of the programme itself. In terms of these effects on the psychological health of viewers, it is important that TV schedulers should consider such effects when preparing and scheduling programmes containing emotively negative content.

### Acknowledgements

The authors are grateful to Paul Williams for his help in editing the videotapes, to Alison Dixon for her assistance with the data analysis, and to David Hitchin for his advice on statistical analyses.

### References

- Averill, J. R. (1969). Autonomic response patterns during sadness and mirth. *ISAS Catalogue of Selected Documents in Psychology*, 5, 330.
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J. & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, 4, 561–571.
- Blaney, P. H. (1986). Affect and memory: A review. *Psychological Bulletin*, 99, 229–246.
- Borkovec, T. D., Robinson, E., Pruzinsky, T. & Dupree, J. A. (1983). Preliminary exploration of worry: Some characteristics and processes. *Behaviour Research and Therapy*, 21, 9–16.
- Cohen, J. (1977). *Statistical Power Analysis for the Behavioural Sciences*. New York: Academic Press.
- Davey, G. C. L., Hampton, J., Farrell, J. & Davidson, S. (1992). Some characteristics of worrying: Evidence for worrying and anxiety as separate constructs. *Personality and Individual Differences*, 13, 133–147.
- Gerrards-Hesse, A., Spies, K. & Hesse, F. W. (1994). Experimental inductions of emotional states and their effectiveness: A review. *British Journal of Psychology*, 85, 55–78.
- Kendall, P. C. & Ingram, R. E. (1987). The future for cognitive assessment of anxiety: Let's get specific. In L. Michaelson & L. M. Ascher (Eds), *Anxiety and Stress Disorders: Cognitive-behavioral Assessment and Treatment*. New York: Guilford.
- Lewis, M. (1994). Good news, bad news. *The Psychologist*, 7, 157–159.

- MacLeod, A. K., Williams, J. M. G. & Bekerian, D. A. (1991). Worry is reasonable: The role of explanations in pessimism about future personal events. *Journal of Abnormal Psychology*, **100**, 478-486.
- McHugo, G. J., Smith, G. A. & Lanzetta, J. T. (1982). The structure of self-reports of emotional responses to film segments. *Motivation and Emotion*, **6**, 365-385.
- Mathews, A. (1990). Why worry? The cognitive structure of anxiety. *Behaviour Research and Therapy*, **28**, 455-468.
- Mathews, A. & MacLeod, C. (1994). Cognitive approaches to emotion and emotional disorders. *Annual Review of Psychology*, **45**, 25-50.
- Metzger, R. L., Miller, M. L., Chen, M., Sofka, M. & Borkovec, T. D. (1990). Worry changes decision making: The effect of negative thoughts on cognitive processing. *Journal of Clinical Psychology*, **48**, 76-88.
- Meyer, T. J., Miller, M. L., Metzger, R. L. & Borkovec, T. D. (1990). Development and validation of the Penn State Worry Questionnaire. *Behaviour Research and Therapy*, **28**, 487-495.
- Mogg, K., Mathews, A. & Eysenck, M. (1992). Attentional bias to threat in clinical anxiety states. *Cognition and Emotion*, **6**, 149-159.
- Philippot, P. (1993). Inducing and assessing differentiated emotion-feeling states in the laboratory. *Cognition and Emotion*, **7**, 171-193.
- Scott, J. C. (1930). Systolic blood-pressure with sex, anger, and fear. *Journal of Comparative Psychology*, **10**, 97-114.
- Spielberger, C. C. (1983). *State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press.
- Sternbach, R. A. (1962). Assessing differential autonomic patterns in emotions. *Journal of Psychosomatic Research*, **6**, 87-91.
- The Guardian* (1993). Tuesday, 16 November, p. 3.
- Vasey, M. & Borkovec, T. D. (1992). A catastrophizing assessment of worrisome thoughts. *Cognitive Therapy and Research*, **16**, 505-520.
- Wells, A. (1994). Attention and the control of worry. In G. C. L. Davey & F. Tallis (Eds), *Worrying: Perspectives on Theory, Assessment and Treatment*. Chichester: Wiley.
- York, D., Borkovec, T. D., Vasey, M. & Stern, R. (1987). Effects of worry and somatic anxiety induction on thoughts, emotion and physiological reactivity. *Behaviour Research and Therapy*, **25**, 523-526.