The Effects of Time Pressure on Managerial Decision Making

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ABSTRACT

We investigate how time pressure affects decisions taken by managers in the workplace. From laboratory research we predicted use of four coping strategies:
• Filtration (process only important information),
• Acceleration (increase processing speed),
• Relying on Intuition,
• Challenging/Ignoring the Deadline.
We also explore whether other strategies are used, present a model to explain how strategy use is determined and report some initial findings that evaluate the model.

BACKGROUND

Our proposed model (Figure 1) draws on the transactional stress model (Lazarus & Folkman, (1987) used extensively to explain stress effects, including time pressure. The model involves two mechanisms – primary appraisal that assesses the demands experienced in the context of the time available; and secondary appraisal that determines which problem-focused coping responses to use when time demands are perceived as excessive.

Our model follows Maule & Hockey (1993) in assuming that monitoring of available time to successfully complete a decision occurs automatically throughout a decision process (Time Monitor in Figure 1). If this indicates lack of time might pose a threat to successful decision making, the need for primary appraisal is signalled to assess this threat. A key input to this appraisal process will be the decision maker's appraisal of the time demands, e.g. how much less time is available than needed. The model predicts (based on literature) that the way time demands are appraised may also depend upon appraisals of other demands associated with the decision situation:
▪ task characteristics;
▪ other demands on the decision maker; and
▪ the type of decision (e.g. if experienced previously).
For brevity here we only focus on time demands.

If a threat is detected secondary appraisal is activated to identify appropriate coping strategies to manage/ reduce the threat. Baethge et al (2018) suggest that strategies such as acceleration and filtration are problem-focused coping responses based on secondary appraisal
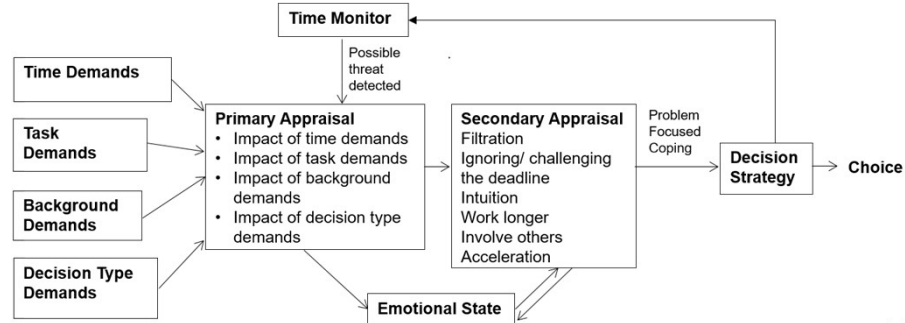

Figure 1

METHODOLOGY

We used Critical Incident Analysis, an effective method for measuring the effects of stress in the workplace (O'Driscoll & Cooper, 1994).We briefly report two studies, which ask managers about a recent time pressured decision they had taken. Study 1 was primarily designed to identify the range of coping strategies used by managers; Study 2 investigated the relationships between the primary appraisal of the four demands outlined in the model and choice of coping strategies during secondary appraisal. Here we focus only on results for appraisal of time demands.

Both studies involved practicing middle /senior managers (Study 1= 220, Study2 =350)

RESULTS

Study 1

Participants rated how much they used of each of 37 small scale processing changes identified from the literature and discussion with practicing managers. These were factor analysed with factor retention determined by parallel analysis. The analysis revealed six factors with eigenvalues above the average from the simulation, and the first four factors were statistically significantly different from the average. The fifth and sixth were retained due to theoretical relevance. Table 1 summarises this analysis by providing a factor name, how many of the 37 items loaded above 0.4 on each, and the reliability of the scale derived from those elements loading on each factor in terms of Cronbach's alpha for Study 1 and Study 2. For brevity we only list two example items for each factor.

Study 2

This study looked at how primary appraisals of the four demands shown above relate to coping strategies selected in secondary appraisal. In terms of time demands appraisal we asked questions related to:

• whether the deadline was self or externally imposed;
• how much less time was available than was needed;
• the impact of not meeting the deadline
• time demands from other work/non-work activities;
• characteristics of the deadline such as flexibility;
• how time pressured the participant felt.

An important finding from our analysis is that the use of all strategies is positively correlated suggesting strategy choice is not a trade-off of one strategy against another, multiple approaches are used.

For time demands we find:
• More negative impact from not meeting the deadline was significantly related to all strategies except challenging the deadline. Using intuition was only sensitive to this variable
• When very much less time was available than needed there was greater use of filtration and working longer
• If deadlines are imposed by others there is less use of challenging the deadline, working longer and acceleration. Deadlines that are flexible or emerge during the task are more likely to be challenged.
• As individuals felt higher levels of time pressure, they were more likely to work longer or use acceleration.

DISCUSSION

• Managers not only use the four strategies found in laboratory studies but also two that were previously unidentified – involve others and work longer.
• Initial analyses suggest our model provides a useful way for conceptualising time pressure effects allowing us to establish important relationships between characteristics of time pressure demands and the strategies used by managers to cope with these demands.

• In particular, the appraisals of negative impact from missing a deadline related to the highest number of strategies (5 out of 6), with having imposed deadlines and demands from other activities relating to 3.

Implications

• Evidence that people use a range of strategies to cope with time pressure challenges laboratory research that assumes time pressure is an intervention for inducing intuitive thinking since this is just one of the six strategies people may use.
• Understanding the range of coping responses used by managers and the factors influencing why and when each is adopted is the first step in developing a comprehensive theory likely to provide a basis for developing training and interventions to help managers manage time pressure more effectively.

Table 1

Factor 1: Filtering: (9 items loading; Cronbach S1 = 0.84, S2 = 0.84)
– Focussed only on some parts of the problem, ignoring others
– Analysed only the important information, neglecting the less important information

Factor 2: Ignoring/redefining the deadline (5 items loading; Cronbach S1 = 0.74, S2 = 0.78)
– Went past the deadline and hoped that I would be able to stall for extra time
– Refused to accept the deadline

Factor 3: Intuition (6 items loading; Cronbach S1 = 0.74, S2 = 0.76)
– Took account of less information than usual
– Relied to a greater extent on intuition

Factor 4: Work Longer (3 items loading; Cronbach S1 = 0.72, S2 = 0.61)
– Didn't take scheduled rests and breaks (e.g. coffee break/lunch)
– Worked past the normal finishing time

Factor 5: Involve Others (3 items loading; Cronbach S1 = 0.71, S2 = 0.69)
– Delegated more of the activity to others
– Asked others for advice about the decision

Factor 6: Acceleration (3 items loading; Cronbach S1 = 0.68, S2 = 0.54)
– Tried to think faster than usual
– Generally speeded up my rate of working