

Coping with Information Overload in a Sales Environment

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The sales process is changing due to environmental pressures, and these changes are requiring salespeople to learn to cope with increasing amounts of information. Creating partnering relationships with customers and the expansion of product lines have both caused an increase in the information requirements of a sales career. As salespeople deal with increasing amounts of information, they may experience the effects of information overload. Effects include increasing errors and feelings of confusion or frustration. An important question is how can this impact be mediated? The results of a mail survey offer evidence that certain coping strategies are better than others at reducing the effects of information overload.

The sales management literature implies that salespeople can be overloaded with information. This implication is made through the discussion of methods that reduce the amount of information (e.g., sales force specialization, sales teams) but are more costly to operate (Johnston and Marshall 2003; Weitz and Bradford 1999) and more difficult to manage (Dixon, Gassenheimer, and Barr 2002). Due to the increased operational and managerial costs of solutions, it is important to determine how the effects of information overload can be reduced. By reducing the impact of information overload on the sales force, management may be able to avoid or at least postpone the cost increases associated with other solutions to information overload. The primary objective of this study is to identify coping strategies that can reduce the harmful effects of information overload on salespeople.

This objective is important because of increasing information requirements. Establishing relationships with customers requires salespeople to cope with increasing amounts of information (Weitz and Bradford 1999). Because the benefits of such relationships have been reported in the literature (Reynolds and Beatty 1999; Weitz and Bradford 1999), it is reasonable to assume that relationships will become more popular and create greater information requirements. As information requirements increase, so will the importance of coping with large amounts of information.

Coping with the effects of information overload is also important because it impacts important sales outcomes (Hunter 2003). Sales performance has been shown to be negatively related to information overload. Effectively coping with the effects of information overload should help performance when information requirements are growing.

Examining how coping strategies can reduce the effects of information overload extends the sales management literature. While the literature implies that information overload can have negative effects, little research examines how to reduce those effects. Further, such research is important because most of the strategies for dealing with information overload are costly. Some strategies suggested in the literature are creating sales teams (Weitz and Bradford 1999) and sales force specialization (Johnston and Marshall 2003). Another option would be to reduce the product line but that may be inconsistent with the firm's strategy.

Importantly, identifying methods of alleviating information overload should improve the quality of life for salespeople. By improving performance, financial resources should increase and job satisfaction should rise through reducing the effects of information overload. Having more satisfied employees could lead to improved performance and offers a win-win situation for the employee and the company.

The manuscript is organized as follows. First, the literature regarding information overload and coping in the sales management literature is reviewed. Hypotheses and a model are also presented in this section. Second, the method and the results of a survey are presented. The paper concludes with limitations and future research.

Conceptual Background and Hypotheses

Information overload refers to a state, evoked by exposure to an amount of information exceeding an individual's ability to process or assimilate during a given amount of time (Jacoby, Speller, and Kohn 1974). While this definition is based in the information processing literatures (Miller 1956; Malhotra 1982), research suggests that

salespeople must process large amounts of information in order to be effective. Spiro and Weitz (1990) suggest that one dimension of adaptive selling is gathering information about the customer. Salespeople are seen as sources of information about customers (Chonko, Tanner, and Smith 1991). Salespeople must collect information in order to correctly categorize consumers (Leong, Busch, and John 1989). Part of a salesperson's job is to reduce the amount of information given to customers by deciding which is more appropriate for that customer's situation (Williams, Spiro, and Fine 1990). Exposure to such large amounts of information suggests that salespeople might also suffer from the effects of information overload.

Information Overload

Information overload is characterized by two outcomes, increasing errors and negative affect (e.g., confusion, frustration). Information overload research offers evidence that decision makers have a finite processing capacity and that exceeding this capacity results in negative affect and errors (e.g., Jacoby et al. 1974).

Information Overload and Sales Performance

Following from information overload theory, a large amount of product information will result in increased errors in salespersons' interactions with and information gathering activities regarding consumers. The increase in errors will cause a decrease in sales performance through the misclassification of consumers or incorrect statements during the sales process. An indicator of effective salesperson performance is the use of an elaborate and detailed mental classification system for consumers (Sharma,

Levy, and Kumar 2000; Sujan, Weitz, and Kumar 1994). Errors in classifying consumers should reduce the effectiveness of such a classification system. Similarly, incorrect statements should tend to lower consumer perceptions of salesperson expertise and expertise has been shown to be a predictor of sales performance (Boles, Johnson, and Barksdale 2000; Busch and Wilson 1976).

H1: Information overload will have a negative relationship with sales performance.

Information Overload and Job Satisfaction

Job satisfaction is defined as “a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences (Locke 1976, p. 1300).” (Brown and Peterson 1993). Given that information overload involves negative emotions (e.g., frustration) while on the job it follows that it will be negatively related to job satisfaction.

H2: Information overload will have a negative relationship with job satisfaction.

Coping Styles

Coping refers to an individual’s efforts to manage the psychological demands of any environment that is straining the person’s resources (Folkman et al. 1985; Strutton and Lumpkin 1993). Information overload theory suggests that when a salesperson’s ability to assimilate and process information is being strained, some type of coping strategy should be implemented. Two broad types of coping strategies that have been investigated in the sales literature are problem-focused coping (PFC) and emotion-

focused coping (EFC) (Srivastava and Sager 1999; Strutton and Lumpkin 1993). These broad strategies are composed of more specific coping tactics (Strutton and Lumpkin 1994). Figure 1 represents the hypothesized relationship between information overload, coping strategies, sales performance, and job satisfaction.

Insert Figure 1 about here

Specifically, Strutton and Lumpkin (1993) find that 3 specific problem focused coping strategies influence sales presentation effectiveness. These 3 strategies are directed problem solving, positive reinterpretation, and pure problem focus. Directed problem solving involves drawing on past experience to come up with alternative solutions and implementing those solutions. Positive reinterpretation involves viewing the experience as a means of personal growth. Finally, pure problem focus involves making a plan of action and following it. Pure problem focus is characterized by giving less concern to the emotions experienced and placing more weight on analysis of the situation.

In general, problem focused-coping strategies involve activities that are driven by the goal of removing or going around the source of the stress (Strutton and Lumpkin 1993). PFC entails deliberate efforts to remove the causes of stress. It involves defining the cause of stress, generating alternatives, evaluating the alternatives, choosing the alternative and implementing the alternative (Lazarus and Folkman 1984, p. 152; Srivastava and Sager 1999). An activity, even just the formulation of a plan, which moves toward relieving a stressor, should result in increasing positive emotion. Positive

emotion should act to offset the negative emotion associated with information overload. Positive emotions are associated with increasing job satisfaction. Problem focused coping strategies should mediate the relationship between information n overload and job satisfaction.

H3a: Directed problem solving will attenuate the relationship between information overload and job satisfaction.

H3b: Positive reinterpretation will attenuate the relationship between information overload and job satisfaction.

H3c: Pure problem focus will attenuate the relationship between information overload and job satisfaction.

Pursuing activities that have a goal of removing or going around too much information should lead to more effectively doing so. Information overload is associated with increasing errors and negative affect which can negatively influence sales performance (Hunter 2003). Activities that reduce these negative consequences should result in increased sales performance.

H4a: Directed problem solving will attenuate the relationship between information overload and sales performance.

H4b: Positive reinterpretation will attenuate the relationship between information overload and sales performance.

H4c: Pure problem focus will attenuate the relationship between information overload and sales performance.

Emotion-focused coping strategies involve attempts to reduce or eliminate the emotional distress associated with, or caused by, the stressful circumstances (Strutton and Lumpkin 1993). EFC encompasses activities directed to distancing oneself from stress such as avoidance, seeking social support and selective attention (Srivastava and Sager 1999).

Strutton and Lumpkin (1994) find that sales presentation effectiveness has a negative relationship with 3 emotion focused coping strategies; seeking distance, self-indulgent escapism, and negative avoidance. Seeking distance is defined as accepting or ignoring the situation. Self-indulgent escapism involves using self-rewards to make oneself feel better. Negative avoidance involves refusing to believe the situation exists, taking it out on others, or avoiding others.

Emotion focused coping strategies seek to reduce or eliminate emotional distress associated with information overload. One outcome associated with information overload is negative emotions such as confusion or frustration. By reducing these negative emotions, emotion focused coping strategies should offset their influence on job satisfaction. Job satisfaction has an emotional dimension and thus should be positively associated with a coping strategy that reduces negative emotions. Emotion focused

coping strategies should mediate the relationship between information overload and job satisfaction.

H5a: Seeking distance will attenuate the relationship between information overload and job satisfaction.

H5b: Self-indulgent escapism will attenuate the relationship between information overload and job satisfaction.

H5c: Negative avoidance will attenuate the relationship between information overload and job satisfaction.

Emotion focused coping is an inner directed strategy for reducing the emotional consequences of too much information. As such, use of this coping strategy should mitigate the emotional outcomes of information overload. Sales performance has been associated with a belief in the ability to perform the job. Negative affect has been shown to reduce this belief (Hunter 2003). Reducing the influence of negative affect should increase sales performance.

H6a: Seeking distance will attenuate the relationship between information overload and sales performance.

H6b: Self-indulgent escapism will attenuate the relationship between information overload and sales performance.

H6c: Negative avoidance will attenuate the relationship between information overload and sales performance.

Methods

In order to test the hypotheses, a mail survey was sent to 798 insurance agents in Illinois. Insurance agents were chosen as the sample because a recent trend in the industry and the nature of their products suggest they would likely suffer from information overload. Many companies within the insurance industry are offering a broader and more complex product line as they attempt to gain market share in the financial services industry. An initial wave of surveys was followed by a reminder postcard and a second survey to those not responding (e.g., Dillman 1974). Two hundred and four usable responses were returned for a response rate of 26%.

Sample

The majority of respondents were independent agents (75%) reporting agency sales of over one million dollars (54%). Most agencies employed 4 or fewer people (57%). The majority of respondents were male (90%) and their average age was 55. The average experience in the insurance industry was 33 years, while average experience in sales was 28 years.

Measures

All measures used scales that have previously been used in the literature. Information overload is measured using the Salespersons' Susceptibility to Information Overload scale reported in Hunter and Vandersnick (2004). Sales performance is measured using a self-report scale developed by Sujan et al. (1994). Job satisfaction is measured by three components of the reduced INDSALES (Comer, Machleit, and Lagace 1989). The three components of job satisfaction; general satisfaction, satisfaction with management, and satisfaction with customers are composed of twelve items. Two frequent sources of information for salespeople are management (e.g., new sales techniques, new products) and consumers, so these two dimensions as well as the general measure of satisfaction were used. Coping strategies are measured by the 38 item scale reported in Strutton and Lumpkin (1993). The scale was adapted from a 43 item version of the Ways of Coping Checklist (Folkman and Lazarus 1980; 1985). All measures, excluding two emotion focused coping strategies, exceeded acceptable levels of reliability. Reliability levels, along with other descriptive statistics and correlations are provided in Table 1.

Insert Table 1 about here

Results

Hypotheses were examined using regression analyses. Analysis of H1 offered evidence of a negative relationship between information overload and sales performance ($t = -5.602, p < .05$). Hypothesis two, predicting a negative relationship between job satisfaction and information overload is also supported by the results ($t = -5.647, p < .05$). Analysis of the remaining hypotheses used techniques described by Baron and Kenny

(1986) to test for mediation. Results offer evidence that support all parts of H3 and H4 because the effects of information overload on sales performance ($t = -5.460, p < .05$) and job satisfaction ($t = -5.509, p < .05$) are reduced when problem focused coping strategies are regressed on job satisfaction ($t = 4.750, p < .05; t = 4.323, p < .05; t = 4.506, p < .05$) and sales performance ($t = 4.646, p < .05; t = 4.320, p < .05; t = 4.584, p < .05$).

Hypotheses 5a and 5b are not supported by the data because a relationship is not found between information overload and the coping strategy of seeking distance ($t = .807, p > .05$) and self-indulgent escapism drops out of the equation when information overload is controlled ($t = -1.091, p > .05$). However, H5c demonstrates results that are in contrast to the hypotheses. The data supports a mediated relationship because negative avoidance does have a significant relationship with job satisfaction ($t = -2.106, p < .05$) which lessens the influence of information overload. However, the effects of information overload on job satisfaction are amplified by the use of negative avoidance. Hypothesis 6a, 6b, or 6c are not supported by the data. The results for the significant analyses are provided in Table 2a and Table 2b.

Insert Table 2a and 2b about here

Discussion

The results offer evidence that some problem focused coping strategies can attenuate the effects of information overload on sales performance and job satisfaction. Interestingly, the use of three coping strategies, positive reinterpretation, pure problem focus, and directed problem solving mediated the influence of information overload on both sales performance and job satisfaction. The results offer evidence that one emotional coping strategy can amplify the negative effects of information overload on job satisfaction. Negative avoidance was found to amplify the influence of information overload on job satisfaction but not on sales performance. Although future research is necessary to determine its feasibility, a potential explanation is that job satisfaction has an affective dimension that sales performance does not. The affective dimension of job satisfaction might make it more vulnerable to an emotional coping strategy.

Managerial Implications

Results of this study, if validated by future research, should enable sales managers to reduce the negative impact of information overload. Research suggests that salespeople can be taught to use problem focused coping strategies (Strutton and Lumpkin 1994). The results of this study suggest that such strategies can mediate the impact of information overload. Teaching salespeople to use these strategies should result in enhanced efficiency as salespeople can cope with a larger amount of information without the need for reorganization. Lessening the need for reorganization can eliminate or postpone that expense.

Limitations

The study has limitations which should be considered when examining these results. The study relied on data collected from a single industry. Thus the generalizability to salespeople in other industries should be questioned. It may be that these coping strategies reduce the effects of information overload for insurance salespeople but not for those in other industries. More research in different industries is necessary to determine the generalizability of these results.

Reliabilities for two of the coping strategies were very low. Thus results involving seeking distance and self-indulgent escapism cannot be relied upon. More research is necessary to determine whether these emotion focused coping strategies can aid in reducing the effects of information overload.

Future Research

Future research should focus on exploring these results in different contexts and with other outcome and mediating variables. As discussed above, a single industry is represented by these results. Research offers evidence that a number of variables are related to both job satisfaction and job performance. Research is necessary to determine if our findings will hold when other explanatory variables are measured simultaneously.

Conclusions

This study offers evidence that adopting some problem focused coping strategies can attenuate the effects of information overload on two important sales outcomes. Such a finding is important for three reasons: 1) higher costs of other solutions to information

overload such as creating sales teams, reorganizing the sales force or reducing the product line; 2) expanding information requirements of a sales career suggest that the problem will continue or increase in the future; 3) success has been reported in training people to use such strategies. Therefore, salespeople can be trained to more effectively cope with information overload. Salespeople who are more effective at coping should not only represent a cost savings to sales managers but should also improve the quality of life for salespeople by decreasing stress. This study provides preliminary evidence for a win-win solution in dealing with the increasing information requirements of sales position.

Figure 1
The Relationship between Information Overload, Coping Strategies, and Sales Outcomes

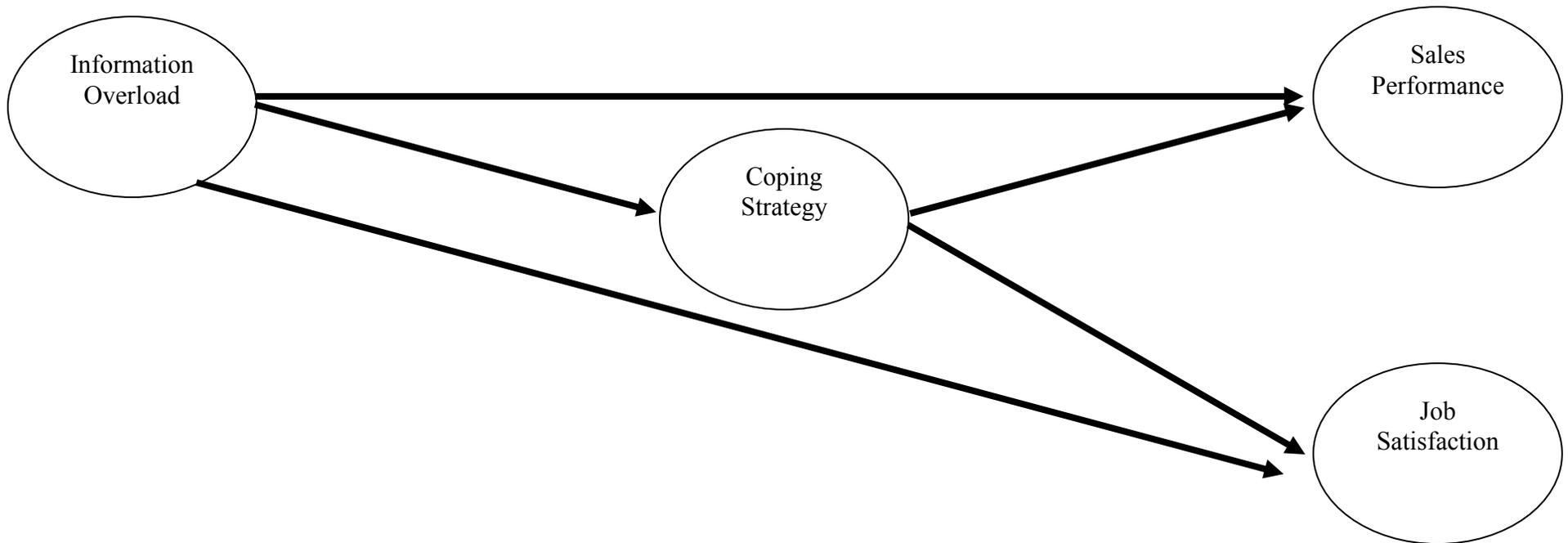


Table 1
Means, Alpha Coefficients, Standard Deviations, and Correlations

Variable	A	M	s	1	2	3	4	5	6	7	8
1. Information Overload	.86	15.21	6.26	1							
2. Sales Performance	.78	35.60	7.74	-.367*	1						
3. Job Satisfaction	.88	62.32	9.47	-.369*	.444*	1					
4. Directed Problem Solving	.76	16.72	2.77	-.280*	.287*	.270*	1				
5. Positive Reinterpretation	.82	15.64	3.04	-.306*	.348*	.359*	.469*	1			
6. Pure Problem Focus	.60	10.08	2.03	-.271*	.317*	.358*	.424*	.342*	1		
7. Seeking Distance	.79	17.97	5.46	.057	.050	.089	.059	.112	.216*	1	
8. Self-indulgent Escapism	.48	5.01	2.36	.221*	-.164*	-.151*	-.205*	-.068	-.080	.286*	1
9. Negative Avoidance	.73	6.85	3.25	.412*	-.228*	-.277*	-.262*	-.234*	-.051	.304*	.491

Table 2a
The Effects of Coping Strategies on Information Overload and Outcomes

Related Hypothesis	H1	H2	H3a	H3a	H3b	H3b	H3c	H3c
Independent Variable(s)	Information Overload	Information Overload	Information Overload	Information Overload/ DPS	Information Overload	Information Overload / PR	Information Overload	Information Overload/ PPF
Dependent variable	Sales Performance	Job Satisfaction	DPS	Job Satisfaction	PR	Job Satisfaction	PPF	Job Satisfaction
Adjusted R ²	.130	.132	.074	.158	.089	.195	.069	.200
F-statistic	31.386	31.887	17.133	20.083	20.942	25.633	16.025	26.383
p-Value	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
Beta coefficients ^a	-.367	-.369	-.280	-.319/.181	-.306	-.286 / .272	-.271	-.294 / .278
t-statistics	-5.602*	-5.647*	-4.139*	-4.750*/ 2.700*	-4.576*	-4.323* / 4.108*	-4.003*	-4.506* / 4.262*

DPS, PR, and PPF = directed problem solving, positive reinterpretation, and pure problem focus respectively.

a = standardized values are provided.

* = significant at $p < .05$.

Table 2b
The Effects of Coping Strategies on Information Overload and Outcomes

Related Hypothesis	H4a	H4b	H4c	H5c	H5c	H6c
Independent Variable(s)	Information Overload/ DPS	Information Overload / PR	Information Overload/ PPF	Information Overload	Information Overload/ Negative	Information Overload / Negative
Dependent variable	Sales Performance	Sales Performance	Sales Performance	Negative	Job Satisfaction	Sales Performance
Adjusted R ²	.163	.188	.177	.166	.147	.133
F-statistic	20.801	24.447	22.867	41.365	18.433	16.585
p-Value	.0001	.0001	.0001	.0001	.0001	.0001
Beta coefficients ^a	-.311/.200	-.287 / .260	-.303 / .234	.412	-.307/.150	-.328 / -.093
t-statistics	-4.646*/ 2.996*	-4.320* / 3.910*	-4.584* / 3.543*	6.432*	-4.320*/ -2.106*	-4.578* / -1.296

Negative = negative avoidance.

a = standardized values are provided.

* = significant at $p < .05$.

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