An Extended Model Of Disconfirmation:
Expectancies Relating To High Risk Drinking Experiences.

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Abstract

To date, customer satisfaction and service quality studies have only focused on disconfirmation of expectations in terms of product/service attributes. This study applies the disconfirmation of expectations paradigm to explain what makes the consumption of sin products (high risk alcohol consumption) a satisfactory or unsatisfactory experience. In doing so, it illustrates that disconfirmation of expectations should focus on consumption outcomes as they motivate customers to consume products and services. Furthermore, both positive and negative outcome expectancies should be included. The alcohol expectancy literature offers operational definitions of positive and negative outcome expectancies. However, alcohol expectancy studies do not use the disconfirmation paradigm to explain high risk drinking behaviours. This is a serious omission as disconfirmation of expectations have been shown to be a better predictor of customer satisfaction and behavioural intentions than customer expectations This study concludes with data gained from a university setting testing the hypotheses proposed, showing distinct differences between positive and negative disconfirmation of outcome expectations.

Keywords: disconfirmation, outcome expectancies, experience expectations, satisfaction.

Introduction

Past research has shown that high risk drinking (defined by Oei & Morawska 2004 as four or more drinks for women and six or more drinks for men per drinking episode) amongst university students is a serious problem, both within Australia and the world (e.g. Burden & Maisto 2000; McNally & Palfai 2001; Neighbors et al. 2003; Oei & Morawska 2004; Park 2004). Alcohol is part of the culture of university life and a large proportion of students (44%) have been classified as high risk drinkers in the US (Oei & Morawska 2004). Similarly, the Salvation Army recently announced that 44% of Australian adolescents engage in high risk drinking behaviours (Channel 9 News 16-9-2004).

Within customer satisfaction and service quality research, disconfirmation has been operationalised in terms of meeting product / service attribute expectations (Oliver & Bearden 1985; Swan & Trawick 1981). Subsequently three types of discrepancies are presented; 1) Positive disconfirmation, where performance exceeds expectations, 2) Confirmation, where performance equals expectations, and 3) Negative disconfirmation, where performance falls below expectations. Due to a shift in focus to customer delight, it has been suggested that customer satisfaction surveys need to measure the whole customer experience and other consequences of it (Shaw & Ivens 2002). A need exists to focus on the disconfirmation of consumption consequences, as customers' are motivated by consumption outcomes, rather than product / service attributes. Studies which have investigated emotional responses to consumption experiences highlight that customers may experience positive (e.g. pleasured / arousal) and negative (e.g. displeasure / boredom) emotions which are generally presented in the form of a positive to negative continuum (Mano & Oliver 1993). However, social marketing studies have found that positive experience expectations (e.g. feeling relaxed when consuming large quantities of alcohol) differ conceptually from negative experience expectations (e.g. vomiting after a heavy drinking episode). More specifically, positive expectations of high risk drinking include *fun, sex,* and *tension reduction*, and negative expectations

include *physical, cognitive* and *school problems* (McNally & Palfai 2001; Park 2004). A number of studies empirically support the difference between positive and negative outcome expectancies (Leigh & Stacy 1993; McNally & Palfai 2001; Park 2004). However, the alcohol expectancy literature fails to investigate the impact of disconfirmation of consumption outcome expectancies on intentions to engage in harmful consumption behaviours. Considering disconfirmation of expectations is a better predictor of customer satisfaction than expectations and behavioural intentions (e.g. Burton et al. 2003; Oliver 1980; Robledo 2001; Ross et al. 1987; White & Schneider 2000), this is a significant shortcoming as addressed by this study. This study proposes a research model which suggests that satisfactory / unsatisfactory drinking experience mediate the disconfirmation of positive / negative outcome expectancy and readiness to change high risk drinking behaviour. As such it extends the disconfirmation paradigm studies in three core ways:

1. Emphasis is placed on consequences of consumption, not product performance / service processes attributes.
2. Includes and differentiates between positive and negative consumption experience expectations.
3. Applies the disconfirmation paradigm to the de-marketing context (sin products).

Literature Review and Hypotheses

While several theories have been used to explain the disconfirmation paradigm (e.g. generalized negativity theory, assimilation theory, contrast theory as cited by Ross et al. 1987), none of these appears to incorporate expectations of negative consumption outcomes. Only one qualitative research paper (Fitchett & Smith 2002), which investigated illicit drug consumption, notes the difference between positive and negative outcome expectancies. They found that satisfactory experiences reinforced future consumption, whereas dissatisfactory experiences would not cause cessation of usage. If consumption was dissatisfactory, users would employ several strategies to justify further use, including attributing the outcomes to other factors in the forms of deferment and/or denial. This clearly highlights the need to distinguish between positive and negative consumption outcomes.

Lovelock et al. (2004) claimed that the most dominant model in satisfaction research is the disconfirmation of expectations paradigm. Moreover, Oliver et al. (1994) stated that this paradigm is fairly robust across a broad range of context, including the consumption of illicit drugs (Fitchett & Smith 2002). Their rationale being that recreational drugs are desired, purchase and consumed just like any other mass consumer goods, and the differences relate more to social and moral beliefs rather than the effects or consequences of use (as suggested by Hoffman (1990) and D'Angelo (1994)). Clearly this suggests that the disconfirmation paradigm applies to consumption of alcohol. This study extends the qualitative research conducted by Fitchett and Smith (2002) as it proposes hypotheses and operational measures for conclusive testing.

Past research has shown that positive disconfirmation of expectations increases satisfaction (Ho et al. 1997). If a consumer has a high initial expectation, and the actual service is marginally better than their expectation, satisfaction will result. However, if a second customer has a lower initial expectation, and the actual service is markedly better than their expectation, a higher satisfaction level will result due to the disconfirmation being higher. We propose that this also applies to positive expectancies of high risk drinking behaviour. For example, an adolescent who has a high expectation to make new friends while intoxicated and uninhibited, will be dissatisfied if the experience was not quite as sociable as expected. We propose further that the reverse applies to expectancies about negative outcomes. To illustrate, if an adolescent has a high expectation of

getting a terrible hangover, and the hangover turned out to be relatively mild, the experience will be rated as more satisfactory. Our propositions are summarised in these first two hypotheses:

H_1 – If the positive outcomes are better than expected, then the high risk drinking experience will be more satisfactory.

H_2 – If the negative outcomes are not as bad as expected, then the high risk drinking experience will be more satisfactory.

Past studies have investigated the link between expectancies of alcohol outcomes and readiness to change (e.g. McNally & Palfai 2001) and drinking refusal self efficacy (e.g. Oei & Morawska 2004). As proposed in H_1 and H_2, this study proposes that disconfirmation of positive and negative outcomes expectancies is a better predictor of satisfaction with high risk drinking than expectations per se. Burton et al. (2003) have noted that behavioural intentions and customer satisfaction are positively associated with each another and this was confirmed with their own study that found willingness to reuse a service was strongly associated with satisfaction. Thus if a consumer experiences high satisfaction with their high risk drinking, the likelihood that they will cease drinking, or even change their drinking behaviour is expected to be low. Another study (White & Schneider 2000) found that disconfirmation of service quality expectations had a direct impact on behavioural intentions (in terms of the commitment ladder). This is summarised in the next hypothesis:

H_3 – Satisfaction with high risk drinking decreases readiness to change high risk drinking behaviour.

Figure 1 provides a summary of the hypotheses for this study.

Figure 1: Research Model
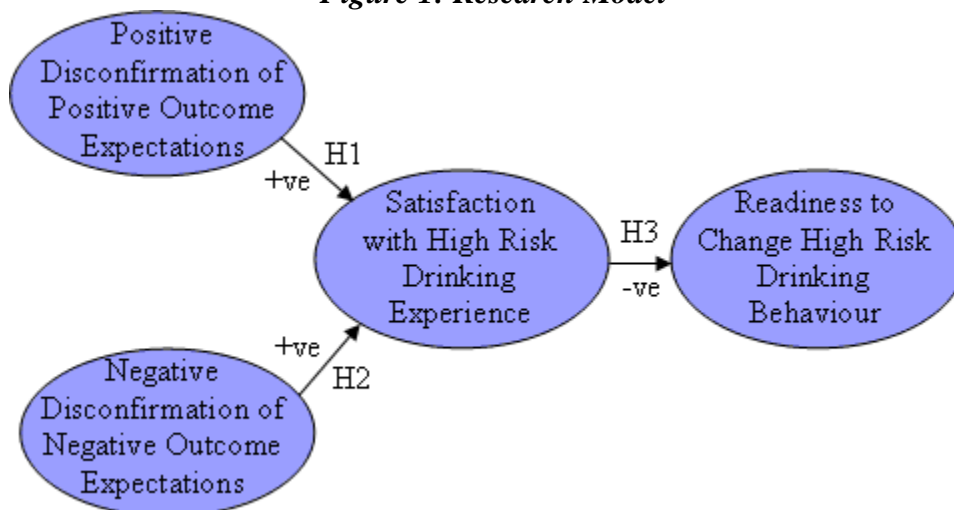
Methodology

A four page survey instrument was developed in the form of a questionnaire for self administered completion. The questionnaire used a combination of established scales, some with minor modification to gain the data required. This was preceded by a cover letter outlining the purpose of the study, as well as requiring respondents to answer two screening questions. The screening questions are particularly important for this study as it requires the respondent to have engaged in high risk drinking. Therefore screening question one ensures respondents are over 17 years of age,

the legal drinking age within Australia. Questionnaires marked 17 years of age or below were asked not to proceed any further and were discarded. The second screening question asks how many times the respondent has engaged in high risk drinking in the past four weeks. Since this research is based on the memory of the last high risk drinking experience, it requires respondents for which it has been a fairly recent occurrence in order to limit the possible bias that may occur after a longer period. Questionnaires marked 0 times were asked not to proceed any further and were discarded.

The questionnaire was administered to a variety of lectures within Curtin University. At least one lecture from each division of the University Bentley campus was targeted in order to gain a relevant cross section of drinking habits and the behaviour of the University as a whole. A focus was given to lectures within the Business division due to the highest proportion of students residing in this division. Divisions where more than one lecture was targeted were divided into different schools as well as different years so as to avoid any repetition of respondents. The final results were gained from seven lectures and yielded a combination of first, second and third year units. Before the questionnaire was started by students, a brief outline of the study and questions was made clear to all students. Further, an overhead projector slide was shown specifying the number of standard alcoholic drinks found in typical serving containers, so as to avoid any misinterpretation.

Results

The data collection yielded 596 returned questionnaires, 22 of which were incomplete, leaving 316 usable (passed both screening questions), equaling a 55% response rate of students that engaged in high risk drinking within the past four weeks. The sample included 51.3% male, with 94% of all students being between the ages of 18 and 25. The data also showed that the highest percentage of students (52.8%) last engaged in high risk drinking less than 1 week ago, and the mean number of times a student had engaged in this behaviour within the past four weeks was 4.

Factor analysis was run over the 38 item alcohol expectancy disconfirmation scale. The analysis shows a very clear and distinct separation between positive and negative factors within the scale, while the scree plot suggests two components. The first component consists of 13 items including Outgoing, Talkative, Friendly, and Sociable, all positive outcome experiences associated with alcohol consumption, and gives a Cronbach Alpha of 0.863. The second component has 10 items which include Clumsy, Difficulty in thinking, Dizzy, and Dulled senses, all negative outcome experiences, with a Cronbach Alpha of 0.764 (Refer to Appendix 1 for rotated factor scores). As is standard, items that cross-loaded were removed. The uni-dimensional satisfaction scale (including all 6 items) produced a Cronbach Alpha of 0.881.

To test H_1, regression analysis was conducted using the items remaining after the reliability analysis was calculated for each of the constructs. The results show that positive outcome expectations have a significant and positive influence on satisfaction (Sig = 0.000, Beta = 0.371, t = 6.720). Therefore H_1 is accepted. To test H_2, the same regression analysis was used, showing no predictive value (Sig = 0.253, Beta = 0.063, t = 1.144). This shows that even if negative outcomes associated with high risk drinking are not as bad as expected, the experience will be less satisfactory, thus rejecting H_2. Further, the R^2 of 0.14 indicates that only 14% of satisfaction is explained by positive and negative experience expectations.

For the readiness to change scale, factor analysis was done for the 16 items. This resulted in three factors, namely; 1) Amount ($\alpha = 0.754$), 2) Change ($\alpha = 0.793$), and 3) Peer Pressure ($\alpha = 0.710$). (Refer to Appendix 2 for rotated factor scores). In order to test H_3, regressions were run to determine if satisfaction with high risk drinking decreases readiness to change high risk drinking

behaviour. The results (shown in Table 1) show some interesting associations, specifically the 'Amount' factor was not significant at all with satisfaction, the 'Change' factor was significant at the 0.05 level, and the 'Peer Pressure' factor was significant at the 0.01 level. Therefore these results suggest that high risk drinker's friends have the greatest influence on their satisfaction levels.

Table 1: The influence of Satisfaction on Readiness to Change - Amount, Readiness to Change - Change and Readiness to Change - Peer Pressure.

Independent Variable	Dependent Variables		
Satisfaction	RTC - Amount	RTC - Change	RTC - Peer Pressure
	Beta: -0.108	Beta: -0.146	Beta: 0.302
	t: -1.882	t: -2.587	t: 5.554
	Sig: 0.061	Sig: 0.010	Sig: 0.000
	R^2: 0.012	R^2: 0.021	R^2: 0.091

Discussion and Implications

Although the results do not support that negative disconfirmation of negative outcome expectations affect satisfaction significantly, they still highlight the need to distinguish between positive and negative expectations. A number of reasons explain why only positive experience expectations had a significant impact on satisfaction. The most convincing of which is Fitchett & Smith's (2002) paper that examined illicit drug consumption. As found here, they noted that instead of allowing the negative experiences to impact satisfaction, or indeed future usage, that consumers would rather deny or defer the experience, dismissing it as a 'one off' occurrence. This allows them to continue usage without fear of reoccurrence.

Logically, if a consumer is satisfied with an experience the need to change that experience will not exist, as opposed to being dissatisfied with an experience which will cause a consumer to change their future behaviour. This has been shown in this study, whereby satisfaction and readiness to change are related.

Managerial implications include developing a more powerful tool in managing customer experiences and expectations, as well as highlighting a need to downplay positive experiences and diminish negative experiences in social marketing campaigns. In addition, this research could have major repercussions for governmental campaigns, such as the drink driving and quit smoking series.

A number of limitations must be noted for this study. Firstly, a small sample size was used. A more robust and descriptive analysis could be made from a larger sample size. Secondly, the fact that this study relies on the memory of a high risk drinkers past experience could potentially be a limitation for this study. Perhaps future research could examine a longitudinal study to determine the before and after effects of high risk drinking. This study was based on the results of a single university. Future research should examine a multi university focus, or possibly entire population focus, in order to draw distinctions between groups. Lastly, future research could also undertake a more robust analysis using structural equations modeling to test the complete research model.

APPENDIX 1

Rotated Factor Scores via Varimax rotation

Factor 1 (Positive)		Factor 2 (Negative)	
Sociable	.527	Response speed	.543
Friendly	.561	Shaky or jittery the next day	.519
Humorous	.570	Risks	.455
Express feelings	.700	Tough	.442
Relaxed	.536	Clumsy	.667
Brave and daring	.603	Head felt fuzzy	.486
Powerful	.631	Difficulty in thinking	.521
Outgoing	.707	Dulled senses	.638
Talkative	.647	Neglected obligations	.564
Creative	.651	Dizzy	.627
Calm	.529	**Eigenvalues**	3.963
Peaceful	.573	**Variance Explained**	10%
Courageous	.682	**Cronbach Alpha (α)**	.764
Eigenvalues	8.002		
Variance Explained	21%		
Cronbach Alpha (α)	.863		

KMO Measure of Sampling Adequacy	.850
Bartlett's Test of Sphericity – Significance	.000

Rotated Factor Scores via Varimax rotation

Factor 1 (Amount)	
I don't think I drink too much	.718
I enjoy my drinking, but sometimes I drink too much	.397
Sometimes I think I should cut down on my drinking	.649
My drinking is a problem sometimes	.485
There is no need for me to think about changing my drinking	.655
I am at the stage where I should think about drinking less alcohol	.651
Eigenvalues	3.979
Variance Explained	25%
Cronbach Alpha (α)	.754

Factor 2 (Change)	
I have just recently changed my drinking habits	.795
Anyone can talk about wanting to do something about drinking, but I am actually doing something about it	.821
I am actually changing my drinking habits right now	.851
Eigenvalues	2.626
Variance Explained	16%
Cronbach Alpha (α)	.793

Factor 3 (Peer Pressure)	
I praise my friends that drink excessively	.791
I do not encourage my friends to drink excessively	.766
I encourage my friends to engage in drinking games	.731
Eigenvalues	1.467
Variance Explained	9%
Cronbach Alpha (α)	.710

KMO Measure of Sampling Adequacy	.776
Bartlett's Test of Sphericity – Significance	.000

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