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Social Word of Mouth Valence and Role of Moderators: An Integrated Model of Consumer Decision Making

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ABSTRACT

The study aimed at coming up with an integrated model of consumer decision making that captures the impact of social media word of mouth (SWOM) on consumers' decision influencing variables including perceived risk, its impact on attitude towards the brand, and eventually on intention to purchase. The integrated model incorporates the impact of SWOM message valence along with moderating role played by various source and receiver level characteristics on the variables mentioned above. Two experiments with between-subject factorial designs were conducted for testing the hypotheses. The first study had 128 participants divided into eight groups and their responses were collected offline. The second study had 221 respondents take part in an online experiment and were provided real life image stimuli for the study. A combination of regression, Manova and Mancova were used for testing the hypotheses. The study established differential impacts of social media message valence, source and reviewer credibility, product knowledge, and involvement level on consumers' decision making.

We extend the understanding of the traditional WOM factor into the SWOM space. The study contributes by establishing the extant role of both, positive and negative SWOM, under different source and receiver level characteristics.

Keywords: social media WOM, message valence, source credibility, reviewer credibility, product knowledge, involvement level

INTRODUCTION

In today's digitally interconnected world, consumers come across reviews and opinions posted by fellow consumers on social media websites (Rettberg, 2014). Social Media word of mouth (SWOM) leverages the ability of users to share information and views of products and brands within their existing network (Erkan & Evans, 2016) and this could unintentionally influence others to purchase these products (Li et al., 2019). Villanueva et al. (2008) found that WOM induced customers added twice the customer equity as compared to marketing induced customers. In a study of referral behavior for online social media sites, while measuring the impact of traditional marketing as compared to that of SWOM (SWOM), it was observed that SWOM referrals have a greater influence than traditional marketing on the recipient consumers (Trusov et al., 2009).

Independent variables that have been studied in literature, in relation to the effectiveness of WOM, can primarily be classified into message valence, source characteristics, receiver characteristics and the medium/media (López & Sicilia, 2014). In terms of valence, WOM messages can have a positive code(P-WOM) or a negative code(N-WOM) (De Matos & Rossi, 2008).

The nature and effect of P-WOM and N-WOM on consumers may differ (Jones et al., 2009) with studies highlighting that P-WOM had a positive impact whereas N-WOM had an insignificant impact on the consumers (Romaniuk, 2007). There have been studies that have established the relationship of WOM valence with other independent variables of source credibility (Radighieri & Mulder, 2014) and receiver's prior knowledge and experience (Jones et al., 2009). While it may seem obvious how consumers may react to P-WOM and N-WOM, the effect might change if moderating elements are incorporated (Relling et al., 2016).

For the purpose of literature review we searched leading international marketing journals for keywords like 'social media', 'social networking', 'WOM' and 'Word-of-mouth' in databases like EBSCO, Emerald, JSTOR, ProQuest and Google Scholar.

In the initial round we got some 50 articles on these topics which were reviewed for basic understanding of Social Media WOM. This phase of literature review indicated that there is some evidence of WOM influencing consumer decision making but there were not many which studied the influence of Social Media WOM on consumer decision making. Some other concepts which were found to be closely related to our research area were group influence, source credibility, social media website, product knowledge, and involvement level. In the next stage of literature review we collected more articles on the consumer decision making variables and other related factors to conduct a comprehensive review of literature. In this stage we referred articles outside marketing domain as well. For example, articles from psychology, sociology, social psychology and economics were also referred. In

total more than 250 journal articles, books and news reports were reviewed leading to a comprehensive inter-disciplinary review of literature on concepts of our interest. Our literature review revealed the following three key dependent variables used for capturing consumer decision making: Perceived Risk, its impact on Attitude towards the brand and subsequently on consumer's Intention to purchase (Bone, 1995; Cheung et al., 2009; Ha, 2002). Extant literature has explored these consumer decision making variables in the traditional WOM and eWOM space but a comprehensive model incorporating impact of SWOM and the moderating factors on consumer decision making variables is yet to be established (Relling et al., 2016). We attempt to bridge this gap in this study.

The study has been structured as follows: review of past studies on the impact of SWOM, message valence, source and receiver characteristics on consumer decision making variables to derive the hypotheses. We follow this with a detailed description of two experiments used for testing the hypotheses. The study concludes with a discussion on the findings and key implications.

SWOM: CONSEQUENCES AND MODERATORS

We start by examining the effect of SWOM on key dependent variables of consumer decision making viz: perceived risk, attitude towards the brand and intention to purchase. This is followed by discussion on the factors associated with source credibility and receiver characteristics.

Impact of SWOM on Perceived Risk

Construct of perceived risk has been conceptualized as “the nature and amount of risk perceived by a consumer in contemplating a particular purchase decision” (Cox & Rich, 1964). Perception of risk results from uncertainty associated with purchase goals, comparison with alternatives and a possibly inferior purchase decision (Kim et al., 2009). For reducing this perception of risk, consumers often reach out to others consumers who would have experienced the product/service earlier. Besides being reliable and trustworthy, this information also provides social support to the choice (Chen & Xie, 2008). On the basis of information gathered from such discussions, the risk perceived could increase, decrease or remain unchanged. Group homogeneity, self-fulfilling rationale, and product category have often been used for explaining impact of WOM and social WOM on perceived risk but the results have been mixed (Chen & Xie, 2008; Ha, 2002). While risk has been argued to have multiple dimensions, studies in past have conceptualized WoM as a communication process and hence there could be a difficulty in establishing the relationship between the two (Stone & Grønhaug, 1993). This relationship needs to

be explored in presence of other influencing factors. For the current study, we take the definition of perceived risk as proposed by Kim et al. (2009) as “a consumer's belief about the potential uncertain negative outcomes from the transaction”. Park & Lee (2009) conceptualized SWOM as a message posted on a social media website having either a positive valence or a negative valence. A positive message (P-WOM) on social media website is likely to assuage the anxiety associated with uncertainty about product/service performance while a negative message is likely to increase this anxiety. Based on this, we posit:

H1: SWOM will impact Perceived Risk of the consumer.

H1a: Positive WOM (P-WOM) on social media will negatively impact Perceived Risk.

H1b: Negative WOM (N-WOM) on social media will positively impact Perceived Risk.

Impact on Attitude towards the brand and Intention to purchase

Consumer's attitude towards any product/service depends on specific attributes of the product/service along with his/her assessment of the same (Eagly & Chaiken, 1993). Consumer's attitude towards a product leads to intention to purchase (Fishbein & Ajzen, 1977). Existing literature has been unable to adequately explore the relationship between WoM and intention to purchase (Buttle, 1998; Maxham III, 2001). While there has been research exploring how SWOM impacts consumer's attitude towards the brand and intention to purchase but the findings of such research were not conclusive and also, the studies did not include the individual impact of Social Media positive and negative WOM (Wu & Wang, 2011). On reading a Social Media P-WOM message, a consumer is likely to develop a positive attitude followed by an increased intention to purchase towards the product.

On the other hand, on reading a Social Media N-WOM message, consumer is likely to develop a negative attitude and subsequently a reduced intention to purchase towards the product (Ajzen, 1991; Sundaram & Webster, 1999). Based on this, we posit:

H2: SWOM will have an impact on Attitude towards the brand.

H2a: P-WOM will positively impact Attitude towards the brand

H2b: N-WOM will negatively impact Attitude towards the brand

H3: SWOM will have an impact on Intention to purchase.

H3a: P-WOM will positively impact Intention to purchase

H3b: N-WOM will negatively impact Intention to purchase

ROLE OF MEDIATING VARIABLES

Researchers have noted a negative relationship between perceived risks and perceived benefits (Sweeney & Soutar, 2001). This means that higher perceived risk should reduce the perceived benefit which subsequently would result in negative impact on attitude towards the brand (Kim & Prabhakar, 2000).

A lower perceived risk will likely result in a more positive attitude towards the brand while a higher perceived risk will likely result in a more negative attitude towards the brand (Mitchell, 1999). Based on this, we posit:

H4: Impact of SWOM on Attitude towards the brand is moderated by perceived risk.

H4a: Perceived risk will moderate impact of P-WOM on Attitude towards the brand.

H4b: Perceived risk will moderate impact of N-WOM on Attitude towards the brand.

Being mostly risk averse, consumers tend to avoid purchasing products that they perceive to be of relatively high risk (Park et al., 2005). Chang & Chen (2008), among others, have reported that, in case of online shopping, a perceived risk is seen to negatively influence consumer intention to purchase. According to the Theory of Planned Behavior (TPB), attitude leads to intention (Ajzen, 1991; Fishbein & Ajzen, 1977). TPB has been extended to the context of online websites as well and researchers advocate that attitude positively impacts intention to purchase for online websites as well (Pavlou & Fygenson, 2006).

We can argue that a perceived risk leads to attitude towards the brand and since attitude towards the brand leads to intention to purchase, attitude towards the brand is likely to be mediating the relationship between perceived risk and intention to purchase. Based on this, we posit:

H5: Attitude towards the brand mediate the relationship between Perceived Risk and Intention to purchase.

Role of Source Characteristics

Role of Source Credibility

Information from more credible sources leads to greater influence on consumer decision making as compared to information from less credible sources (Giffin, 1967). Unlike offline WOM, in SWOM, in-person interaction does not take place and the primary influencer is the SWOM message (Boyd, 2008). Further, in this case, message sender is often unknown to the recipient (Boyd & Ellison, 2007). Hence, source credibility becomes a key determinant in this in deciding the extent of impact on the recipient (Wangenheim & Bayón, 2004). If recipient perceives the source of a SWOM to be credible and the valence of message is positive (i.e., P-WOM), the perceived risk should be significantly reduced. This should then positively impact attitude towards the brand and intention to purchase (Park & Lee, 2009). Alternatively, if the source is credible and valence of message is negative (i.e., N-WOM), the perceived risk should be significantly reduced.

This should then negatively impact attitude towards the brand and intention to purchase (Lee et al., 2008; Sweeney et al., 2008).

But if the writer of the message on social media, whether positive or negative, is perceived less credible, then Perceived Risk, Attitude towards the brand or Intention to purchase may not be impacted significantly (Cheung et al., 2009; Ho & Dempsey, 2010). Along similar lines, Hsieh & Li (2020) noted that a positive relationship between a credible source and a receiver's attitude and subsequent behavior.

Based on this, we posit:

H6a: Impact of SWOM on Perceived Risk will be positively moderated by Source Credibility.

H6b: Impact of SWOM on Attitude towards the brand will be positively moderated by Source Credibility.

H6c: Impact of SWOM on Intention to purchase will be positively moderated by Source Credibility.

Influence of WOM Website

SWOM can emanate from multiple avenues e.g. Facebook updates, online review websites, or personal blog postings (Dhar & Chang, 2009). Consumers have been found to perceive social media outlets differently and the information has a varied impact on recipient consumers (Lee & Youn, 2009). According to the Universal McCann Wave 6 Social Media Research report, the percentage of people changing their opinion after receiving information on social network is 34%, 24% for blogs and 22% for online forums while only 12% were influenced by official or brand websites (McCann, 2012). Thus, it may be noted that different social media websites may result in a differential influence of SWOM on perceived risk, consumer's attitude towards the brand and subsequently on intention to purchase (Jiang et al., 2010). Based on this, we posit:

H7a: Impact of SWOM on Perceived Risk will be moderated by type of social media website.

H7b: Impact of SWOM on Attitude towards the brand will be moderated by type of social media website.

H7c: Impact of SWOM on Intention to purchase will be moderated by type of social media website.

The credibility of SWOM messages differs based on credibility of source of information (Singh et al., 2008). Blogs and forums are normally considered to be more credible sources of information than social networking sites like Facebook (Bickart & Schindler, 2001). Perceived credibility of WOM posted on different social media websites is different and has differential impact on recipient consumers (Brown et al., 2007; Lee & Youn, 2009). In case of SWOM, the website hosting the message forms part of the source along with the reviewer and hence

impact on consumer decision variables should be similar to the impact of source credibility (Flanagin & Metzger, 2007).

So, the effect of SWOM on perceived risk and subsequently on consumer's attitude towards the brand and intention to purchase will be stronger if the website has higher credibility versus websites that have lower credibility (Hausman & Siekpe, 2009; Pavlou & Fygenson, 2006)

Based on this, we posit:

H8a: Impact of SWOM on Perceived Risk will be positively moderated by Credibility of website on which message is posted.

H8b: Impact of SWOM on Attitude towards the brand will be positively moderated by Credibility of website on which message is posted.

H8c: Impact of SWOM on Intention to purchase will be positively moderated by Credibility of website on which message is posted.

Role of Receiver Characteristics

Role of Product Knowledge

With experience, consumers gain product knowledge which helps in their information search, product evaluations and subsequent product choice (Duhan et al., 1997). Elaboration Likelihood Model suggests that enhanced product knowledge results in an improved ability of consumers to evaluate and this leads to central processing of information. On the other hand, low product knowledge results in peripheral processing of information (Cacioppo et al., 1996). Similar type of information processing is also suggested by the Heuristic-Systematic Model (HSM) of Information Processing (Chaiken & Trope, 1999). So, the influence of SWOM on determinants of consumer's decision making process will be stronger when consumer's product knowledge is lower as compared to when it is higher (Bone, 1995). Based on this, we posit:

H9a: Impact of SWOM on Perceived Risk will be negatively moderated by product knowledge.

H9b: Impact of SWOM on Attitude towards the brand will be negatively moderated by product knowledge.

H9c: Impact of SWOM on Intention to purchase will be negatively moderated by product knowledge.

Role of Involvement Level

Level of Involvement has been defined as “a person’s perceived relevance of the object based on inherent needs, values and interests” (Zaichkowsky, 1985).

It influences consumer's purchase process including information process, information processing and finally decision making (Zaichkowsky, 2010).

As per Elaboration Likelihood Model(ELM), consumers pay careful attention to different information elements when their involvement level is high. However, when involvement level is lower, consumer decision making is likely to be driven by peripheral cues (Cacioppo et al., 1996). Similar explanation is provided by Heuristic-Systematic Model of Information Processing (Chen et al., 1999).

So, the influence of SWOM on determinants of consumer’s decision making process is likely to be stronger if the consumer’s involvement level is higher than when it is lower. Based on this, we posit:

H10a: Impact of SWOM on Perceived Risk will be positively moderated by Involvement Level

H10b: Impact of SWOM on Attitude towards the brand will be positively moderated by Involvement Level

H10c: Impact of SWOM on Intention to purchase will be positively moderated by Involvement Level.

Relative Impact of P-WOM and N-WOM

P-WOM and N-WOM have a different impact on the recipient consumer but research in this context is not conclusive. While some researchers have found P-WOM to have a greater influence than N-WOM (Yang & Mai, 2010) , some others have inferred a reverse influence (Park & Lee, 2009). We try to clarify these differences by using the concept of negativity bias and prospect theory. Empirical research findings maintain that for morality related factors in the case of social judgment, negative behavior is considered more diagnostic, but for ability related factors, positive behavior is more diagnostic (Skowronski & Carlston, 1987). However, if we consider social memory or recall, negativity bias plays a more significant role for both, morality and ability related factors (Taylor, 1991). Extremity bias works along with these positivity and negativity biases and extreme behavior is likely to be construed as being more diagnostic than moderate behavior. Baumeister et al. (2001) argue that, in general, unhealthy information is processed with higher rigor than the positive information and has a greater impact on an individual.

Negativity bias suggests that negative information is given greater importance by people in comparison to positive information. As a consequence, consumers may be expected to give greater importance to N-WOM vs P-WOM (Rozin & Royzman, 2001). Research in risk taking behavior indicates that the cost of a decision has significant deterrence value compared to the attraction of equivalent benefits (Tversky & Kahneman, 2000).

Prospect theory suggests that consumer choice is influenced more by potential costs of a decision instead of the likely benefits and they decide in a conservative manner when the choice is expressed in terms of cost (Tversky & Kahneman, 2000). Conservative approach would imply that social media N-WOM highlighting potential costs of making a purchase decision is likely to have a greater impact on consumer choice than social media P-WOM that highlights its potential benefit (Baumeister et al., 2001; Taylor, 1991). Research on that aspect of consumer behavior wherein they search for information, outlines that negative information plays a predominant role product evaluation and intention to purchase in time constrained situations. But when the consumer has no time constraints, positive information plays the predominant role (Hauser et al., 1993). We plan to study a time constrained situation wherein a consumer has to make a purchase decision shortly after reading a SWOM message.

Based on the above stated arguments, we hypothesize:

H11a: Impact of Social Media NWOM on Perceived Risk of the recipient consumer will be more significant than the impact of Social Media PWOM when the recipient consumer makes a purchase decision in a time constrained situation after reading the social media WOM.

H11b: Impact of Social Media NWOM on Brand Attitude of the recipient consumer will be more significant than the impact of Social Media PWOM when the recipient consumer makes a purchase decision in a time constrained situation after reading the social media WOM.

H11c: Impact of Social Media NWOM on Purchase Intention of the recipient consumer will be more significant than the impact of Social Media PWOM when the recipient consumer makes a purchase decision in a time constrained situation after reading the social media WOM.

METHODOLOGY AND RESULTS

The study aims to understand the differential impact of P-WOM and N-WOM on consumer decision making variables of perceived risk, attitude towards the brand, eventually intention to purchase along with the moderation of this impact by receiver and source characteristics. For this purpose, between-subjects factorial design is used with randomized assignment of the respondents, to different treatment groups. Selection bias error is caused by improper assignment of test units to treatment conditions. To avoid selection bias we will use true experimental design where we will assign respondents randomly to the treatment groups.

Similar to other experimental studies conducted in the field of marketing (Danaher & Mullarkey, 2003), we plan to use a survey conducted on management students from a top Indian business school, who primarily come from affluent urban middle to high income families and have been making online purchases. They aptly represent our target population.

We conducted two experiments to validate our research model and hypotheses. Experiment 2 was conducted for validating the results of the first experiment and to see if the mode of data collection (offline vs online) had an impact on results.

Experiment 1

For Experiment 1, we used a 3 factor (SWOM [P-WOM and N-WOM], Reviewer Credibility [high vs. low] and Website Credibility [high vs. low]) between-subjects design. We had 128 respondents for this experiment. Respondents were aged primarily above 25 years (97%) with 61% between 25-35 years, 19% between 35-40 years and 70% above 40 years. 75% of the respondents were male.

The respondents were primarily in the affluent class and 82% respondents had income above 1Mn INR.

For the purpose of Experiment 1, 128 respondents were randomly divided into 8 treatment groups. The product category we chose was a digital camera since it has been tested in multiple online WOM studies as a relevant stimulus product (K.-T. Lee & Koo, 2012). The first step was the collection of the responses for product knowledge and involvement level for digital cameras. The respondents were asked to imagine that they were planning to buy a digital camera in the near future. They were given details of a review on a new brand that had recently been launched in India. They responded to the questions that followed, after which the data on independent and dependent variables was collected using corresponding scales.

Real product reviews posted on social media websites by customers were used as SWOM messages. A manipulation check was undertaken to verify whether the respondents had read and understood the SWOM messages correctly.

Once the respondents had read the reviews and details on reviewer and website credibility, their responses were collected on the basis of the existing scales - Reviewer Credibility (Lichtenstein & Bearden, 1989), Product Knowledge (Flynn et al., 1994), Involvement Level (Moorthy et al., 1997), Perceived Risk (Grewal et al., 1994), Attitude towards the brand (Peracchio & Meyers-Levy, 1997) and Intention to purchase (Baker & Churchill Jr, 1977).

Reviewer credibility was measured using the following items (7-point Likert scale): Insincere-Sincere, Dishonest-Honest, Not Dependable-Dependable, Not Trustworthy-Trustworthy and Not Credible-Credible. Product knowledge was measured on 7-point scale using the following questions: 1.

Among my circle of friends, I'm one of the "experts" on digital camera. 2. I know pretty much about digital camera. 3. I do not feel very knowledgeable about digital camera. 4. Compared to most other people, I know less about digital camera. 5.

When it comes to digital camera, I really don't know a lot. Involvement Level was measured on 7-point scale using the following questions: 1. I have a strong interest in digital camera. 2. I value digital camera as an important part of my current lifestyle. 3. A lot can be said about a person from the digital camera s/he owns. 4.

I like to work on digital camera myself. Perceived risk was measured using the following questions: 1. How sure are you about the product's ability to perform satisfactorily? 2. How much risk would you say would be involved with purchasing the new product? 3. In your opinion, do you feel that the new product would perform as well as other products now on the market? 4. How confident are you of the product's ability to perform as expected? Attitude towards brand was measured using following items: 1. Not at all high quality - Extremely high quality 2.

Poor value - Excellent value 3. Poorly made/crafted - Well made/crafted 4.

Not a worthwhile product - A worthwhile product 5. Unappealing product - Appealing product. Finally, Purchase Intention was measured using the following items: 1. Would you like to try this product? 2. Would you buy this product if you happened to see it in a store? 3. Would you actively seek out this product in a store in order to purchase it?

Results: Experiment 1

Reliability

All the scale items were found to be highly reliable - SWOM (0.945), Reviewer Credibility (0.955), Website Credibility (0.798), Product Knowledge (0.854), Involvement Level (0.783), Perceived Risk (0.814), Attitude towards the brand (0.946) and Intention to purchase (0.806).

Manipulation Check

One-way ANOVA analysis ($F=453.3$, $p=0.000$) between the Social Media P-WOM ($M=5.67$) and N-WOM ($M=1.7$) groups indicate that the manipulation for SWOM worked as expected. One-way ANOVA analysis ($F=167.3$, $p=0.000$) between the high reviewer credibility ($M=5.45$) and low reviewer credibility ($M=2.58$) groups indicate that the manipulation for reviewer credibility worked as expected. One-way ANOVA analysis ($F=59.838$, $p=0.005$) between the high website credibility ($M=4.86$) and low website credibility ($M=3.07$) groups indicate that the manipulation for website credibility worked as expected.

Analysis of the Results

Regression was used to analyze the hypothesized relationships for the direct impact of SWOM on consumer decision making and the mediating roles of Perceived Risk and Attitude towards the brand. The results indicate that SWOM has a significant negative impact on Perceived Risk ($\beta=-0.258$, $p=0.005$) and a significant positive impact on Attitude towards the brand ($\beta=0.312$, $p=0.001$) and Intention to purchase ($\beta=0.280$, $p=0.002$). Thus, hypotheses H1, H2 and H3 found support.

Table 1: Consequences of Social Media WOM in Experiment 1

Dependent Variable	Independent Variable	Beta	p-value	R²	Adj. R²
Perceived Risk	Social Media WOM	-0.258*	0.005	0.067	0.059
Brand Attitude	Social Media WOM	0.312**	0.001	0.097	0.089
Purchase Intention	Social Media WOM	0.280**	0.002	0.079	0.071
** means $p < 0.005$ and * means $p < 0.05$					

We then used the Baron and Kenny (1986) approach to test the mediation effect of Perceived Risk and Attitude towards the brand. We ran two regression analyses with Attitude towards the brand as the dependent variable. For the first regression, Perceived Risk ($\beta=-0.626$, $p=0.000$; Adj $R^2=0.387$) acted as the independent variable and for the second one, SWOM ($\beta=0.161$, $p=0.030$) and Perceived Risk ($\beta=-0.585$, $p=0.000$; Adj $R^2=0.406$) together acted as independent variables. In this model, mediation is supported as effect of Perceived Risk on Attitude towards the brand and remains significant after controlling for SWOM. As effect of SWOM on Attitude towards the brand is still significant in this model, we can conclude that Perceived Risk partially mediates the relationship between SWOM and Attitude towards the brand. This provides support for hypothesis H4.

Table 2: Mediating Role of Perceived Risk in Experiment 1

Dependent Variable	Independent Variable	Beta	P-value	R ²	Adj. R ²
Brand Attitude	Perceived Risk	-0.626**	0.000	0.392	0.387
	Perceived Risk	-0.585**	0.000	0.416	0.406
	Social Media WOM	0.161*	0.030		
** means $p < 0.005$ and * means $p < 0.05$					

For testing the mediating role of attitude towards the brand, we tested three regression models with Intention to purchase being the dependent variable. For the first regression, Perceived Risk ($\beta=-0.552$, $p=0.000$; Adj $R^2=0.229$) acted as an independent variable; for the second regression, Attitude towards the brand ($\beta=0.568$, $p=0.000$; Adj $R^2=0.317$) acted as an independent variable; and for the third regression, Perceived Risk ($\beta=-0.323$, $p=0.001$) and Attitude towards the brand ($\beta=-0.366$, $p=0.000$; Adj $R^2=0.376$) together acted as independent variables. In this model, mediation is supported as the effect of Attitude towards the brand on Intention to purchase and remains significant after controlling for Perceived Risk. As the effect of Perceived Risk on Intention to purchase remains significant in this model, we can conclude that Attitude towards the brand partially mediates relationship between Perceived Risk and Intention to purchase. This provides support for hypothesis H5.

Table 3: Mediating Role of Brand Attitude in Experiment 1

Dependent Variable	Independent Variable	Beta	P-value	R ²	Adj.R ²
Purchase Intention	Perceived Risk	-0.552**	0.000	0.305	0.299
	Brand Attitude	0.568**	0.000	0.323	0.317
	Brand Attitude	0.366**	0.000	0.386	0.376
	Perceived Risk	-0.323**	0.001		
** means $p < 0.005$					

Consequences of Social Media P-WOM and N-WOM

For testing the differential impact of Social Media P-WOM and N-WOM on consumer decision making, we performed the Mancova Analysis with Perceived Risk, Attitude towards the brand and Intention to purchase as dependent variables, SWOM as a fixed factor and Reviewer Credibility, Website Credibility, Product Knowledge and Involvement Level as covariates. The results of the Mancova Analysis revealed that Social Media P-WOM has a negative impact on Perceived Risk ($F=7.682$, $p=0.007$, $M=-0.248$) and a positive impact on Attitude towards the brand ($F=12.175$, $p=0.001$, $M=0.313$) and Intention to purchase ($F=11.269$, $p=0.001$, $M=0.306$). Thus, Hypotheses H1a, H2a and H3a are supported. Social Media N-WOM had a positive impact on Perceived Risk ($M=0.236$) and a negative impact on Attitude towards the brand ($M=-0.297$) and Intention to purchase ($M=-0.291$). Thus, Hypotheses H1b, H2b and H3b are supported. The impact of P-WOM is stronger than that of N-WOM and hence hypotheses H11a, H11b and H11c are not supported, the possible reasons for which have been explained later.

Table 4: Mancova Analysis for Social Media PWOM and NWOM Groups

Dependent Variable	Estimated Mean		Univariate F Test		Corrected Model		
	PWOM	NWOM	F Stats	p-value	Stats	p-value	R ²
Perceived Risk	-0.248	0.236	7.682*	0.007	4.202*	0.002	0.157
Brand Attitude	0.313	-0.297	12.175**	0.001	4.081*	0.002	0.153
Purchase Intention	0.306	-0.291	11.269**	0.001	3.196*	0.010	0.124
Multivariate Effect of WOM Groups: Wilk's Lambda = 0.879, F = 5.103, p-value = 0.002 ** means p-value < 0.005 and * means p-value < 0.05							

Role of Reviewer Credibility

To test moderation by Reviewer Credibility, we tested separate regression models for the High and Low Reviewer Credibility groups with SWOM as an independent variable and Perceived Risk, Attitude towards the brand and Intention to purchase as dependent variables. The results indicate that when the Reviewer Credibility is high, WOM has a significant negative impact on Perceived Risk ($\beta=-0.535$, $p=0.00$) and a significant positive impact on Attitude towards the brand ($\beta=0.686$, $p=0.000$) and Intention to purchase ($\beta=0.541$, $p=0.000$). But when Reviewer Credibility is low, WOM has an insignificant impact on all three dependent variables. These findings indicate that Reviewer Credibility positively moderates the impact of WOM on the three consumer decision making variables. Thus, hypotheses H6a, H6b and H6c are supported.

Table 5: Moderating Role of Reviewer Credibility in Experiment 1

Dependent Variable	Reviewer Credibility	Beta of WOM	t-value	p-value	R ²
Perceived Risk	Low	0.125	1.034	0.305	0.018
	High	-0.535**	-4.784	0.000	0.287
Brand Attitude	Low	-0.058	-0.440	0.662	0.003
	High	0.686**	7.114	0.000	0.470
Purchase Intention	Low	-0.038	-0.290	0.773	0.001
	High	0.541**	4.856	0.000	0.293
Note. ** means $p < 0.005$					

Role of Reviewer Credibility for P-WOM and N-WOM Groups

For assessing moderating role of reviewer credibility, we conducted Mancova Analysis with SWOM and Reviewer Credibility groups as fixed factors; Perceived Risk, Attitude towards the brand and Intention to purchase as dependent variables; and Website Credibility, Involvement level and Product Knowledge as covariates. Mancova was able to estimate the corrected model for all the three dependent variables (Perceived Risk ($F=7.452$, $p \leq 0.000$), Attitude towards the brand ($F=8.503$, $p \leq 0.000$), Intention to purchase ($F=5.621$, $p \leq 0.000$)). This indicates that Reviewer Credibility moderates the impact of Social Media P-WOM and N-WOM on the three consumer decision making variables.

Table 6: Mancova Analysis for Reviewer Credibility in Experiment 1

Model Fit	Perceived Risk	Brand Attitude	Purchase Intention
F Stats	7.452**	8.503**	5.621**
p-value	0.000	0.000	0.000
R ²	0.285	0.313	0.231
Multivariate Effect of WOM Groups: Wilk's Lambda = 0.856, $F = 6.192$, p -value = 0.001			
** means p -value < 0.005			

Moderating Role of Website Credibility

For testing moderation by Website Credibility, we tested separate regression models for the high and low Website Credibility groups with SWOM as an independent variable and Perceived Risk, Attitude towards the brand and Intention to purchase as dependent variables. The results suggest that for both Website Credibility groups, SWOM has an insignificant negative impact on Perceived Risk ($p > 0.05$) but the impact is stronger for higher Website Credibility. When Website Credibility is high, SWOM has a positive impact on Attitude towards the brand ($\beta = 0.458$, $p = 0.000$) and Intention to purchase ($\beta = 0.274$, $p = 0.039$). The impact is insignificant on Attitude towards the brand ($p > 0.05$) and Intention to purchase ($p > 0.05$) when Website Credibility is low. These findings indicate that Website Credibility positively moderates the impact of SWOM on Perceived Risk, Attitude towards the brand and Intention to purchase. Thus, hypotheses H8a, H8b and H8c are supported.

Table 7: Moderating Role of Website Credibility in Experiment 1

Dependent Variable	Website Credibility	Beta of WOM	t-value	p-value		R ²
Perceived Risk	Low	-0.166	-1.306	0.197		0.028
	High	-0.239	-1.823	0.074		0.057
Brand Attitude	Low	0.244	1.947	0.056		0.059
	High	0.458**	3.817	0.000		0.209
Purchase Intention	Low	0.245	1.962	0.054		0.060
	High	0.274*	2.116	0.039		0.075
Note. ** means $p < 0.005$ and * means $p < 0.05$						

We conducted the Mancova Analysis with SWOM and Website Credibility groups as fixed factors; Perceived Risk, Attitude towards the brand and Intention to purchase as dependent variables; and Reviewer Credibility, Product Knowledge and Involvement Level as covariates, to find out how the impact of P-WOM and N-WOM on consumer decision making varies for different Website Credibility groups.

Mancova was able to estimate the corrected model for all the three dependent variables (Perceived Risk ($F = 3.484$, $p < 0.003$), Attitude towards the brand ($F = 3.490$, $p < 0.003$), Intention to purchase ($F = 2.660$, $p < 0.019$)).

The results indicate that Website Credibility moderates the impact of P-WOM and N-WOM on variables of consumer decision making.

Table 8: Mancova Analysis for Website Credibility in Experiment 1

Model Fit	Perceived Risk	Brand Attitude	Purchase Intention
F Stats	3.484**	3.490**	2.660*
p-value	0.003	0.003	0.019
R ²	0.157	0.158	0.125
Multivariate Effect of WOM Groups: Wilk's Lambda = 0.878, F = 5.086, p-value = 0.002 ** means p-value < 0.005 and * means p-value < 0.05			

Product Knowledge as a moderator

To test the moderating role of Product Knowledge, a median split for Product Knowledge to create two categories was employed. We tested separate regression models for these two groups with SWOM as an independent variable and Perceived Risk, Attitude towards the brand and Intention to purchase as dependent variables. The results indicate that when Product Knowledge is high, WOM has a negative impact on Perceived Risk ($\beta=-0.254$, $p=0.05$) and a positive impact on Attitude towards the brand ($\beta=0.522$, $p=0.000$) and Intention to purchase ($\beta=0.441$, $p=0.001$). But when Product Knowledge is low, WOM has an insignificant impact ($p>0.05$) on all three dependent variables. The results indicate that Product Knowledge positively moderates the impact of SWOM on Perceived Risk, Attitude towards the brand and Intention to purchase. Thus, hypotheses H9a, H9b and H9c are not supported.

Table 9: Moderating Role of Product Knowledge in Experiment 1

Dependent Variable	Product Knowledge	Beta of WOM	t-value	p-value	R Square
Perceived Risk	Low	-0.203	-1.591	0.117	0.041
	High	-0.254	-1.967	0.054	0.065
Brand Attitude	Low	0.173	1.350	0.182	0.030
	High	0.522**	4.575	0.000	0.272
	Low	0.127	0.987	0.328	0.016

Purchase Intention	High	0.441**	3.681	0.001	0.195
Note. ** means $p < 0.005$ and * means $p < 0.05$					

We then conducted the Mancova Analysis with Product Knowledge and SWOM groups as fixed factors; Perceived Risk, Attitude towards the brand and Intention to purchase as dependent variables; and Reviewer and Website Credibility groups and Involvement Level as covariates, to understand differential impact of P-WOM/N-WOM on consumer decision making variables for different Product Knowledge groups. Mancova was able to estimate the corrected model for all the three dependent variables (Perceived Risk ($F=3.588$, $p \leq 0.003$), Attitude towards the brand ($F=3.931$, $p \leq 0.001$), Intention to purchase ($F=2.422$, $p \leq 0.031$)). The above results indicate that Product Knowledge moderates the impact of P-WOM/N-WOM on consumer decision making.

Moderating Role of Involvement Level

To test the moderating role of Involvement Level, we used a median split for Involvement Level to create two categories. We tested separate regression models for the two involvement level groups with SWOM as an independent variable and Perceived Risk, Attitude towards the brand and Intention to purchase as dependent variables. The results indicate that when Involvement Level is High, WOM has an insignificant negative impact on Perceived Risk ($p > 0.05$) and a positive impact on Attitude towards the brand ($\beta=0.370$, $p=0.005$) and Intention to purchase ($\beta=0.405$, $p=0.002$). But when the Involvement Level is low, WOM has a significant negative impact on Perceived Risk ($\beta=-0.276$, $p=0.027$), a significant positive impact on Attitude towards the brand ($\beta=0.345$, $p=0.005$) and an insignificant impact on Intention to purchase ($p > 0.05$). This indicates that Involvement Level positively moderates the impact of SWOM on Attitude towards the brand and Intention to purchase and negatively moderates the impact of SWOM on Perceived Risk. Thus, hypotheses H10b and H10c are supported but H10a is rejected.

Table 10: Moderating Role of Involvement Level in Experiment 1

Dependent Variable	Involvement Level	Beta of WOM	t-value	p-value	R Square
Perceived Risk	Low	-0.276*	-2.260	0.027	0.076
	High	-0.169	-1.248	0.217	0.029
Brand Attitude	Low	0.345*	2.898	0.005	0.119
	High	0.370*	2.903	0.005	0.137
Purchase Intention	Low	0.162	1.295	0.200	0.026
	High	0.405**	3.228	0.002	0.164

Note. ** means $p < 0.005$ and * means $p < 0.05$

For assessing moderating role of Involvement level, we conducted the Mancova Analysis with SWOM and Involvement Level groups as fixed factors; Perceived Risk, Attitude towards the brand and Intention to purchase as dependent variables; and Reviewer and Website Credibility groups and Product Knowledge as covariates. Mancova was able to estimate the corrected model for all the three dependent variables (Perceived Risk ($F=3.306$, $p<=0.005$), Attitude towards the brand ($F=3.417$, $p<=0.004$), Intention to purchase ($F=2.763$, $p<=0.015$)). The above results indicate that impact of P-WOM and N-WOM on consumer decision making variables is moderated by Involvement level.

Summary of Hypothesis Testing for Experiment 1:

The results from Experiment 1 provide support for all except hypotheses H9a, H9b, H9c (related to Product Knowledge), H10a (the relationship between Involvement Level and Perceived Risk) and H11a, H11b and H11c (differential strength of P-WOM/N-WOM). Such results may be due to the format (pen and paper) of the test. In order to bring elements of Perceived Risk and perceived potential loss closer to real-life, we retested our hypotheses using an online scenario with named websites and with real life images. Post the second experiment, we triangulate our findings from the offline and online setting and provide an explanation for the same.

Experiment 2

In the first experiment, we used the offline data collection method. Since social media is an online platform, we decided to corroborate the findings by collecting data through an online survey. Further, we used the image stimulus which were exact replicas of the reviews people see in an online social media website. For Experiment 2, we used a 3 factor model (SWOM with two levels [P-WOM and N-WOM], Reviewer Credibility with two levels [low vs. high] and three websites

[MouthShut.com, Facebook.com and Personal Blog]) between-subjects design resulting in 12 treatment groups. The three websites chosen on social media were one from the review community (Mouthshut.com), another was a social networking site (Facebook.com) and the third was a personal blog. We had 221 respondents for this experiment. We had 44% respondents aged below 25 years, 43% between 25-30 years, 11% between 30-35 years and rest above 35 years. 80% of the respondents were male. The respondents were primarily in the affluent class and 56% respondents had income above 1Mn INR and 34% with income over 0.5Mn INR annually.

The respondents were post graduate students studying in a premier management institution in India. 221 respondents were assigned randomly to one of 12 treatment groups. In the online survey, the first responses for Involvement Level and product knowledge regarding a digital camera were collected using corresponding scales. The respondents had to imagine purchasing a digital camera in the near future and that a new brand of digital camera has recently been launched in India. They were given details about a review of the camera in an image format similar to how they see reviews in an online social media website. Then, the data on independent and dependent variables was collected using corresponding scales. Before proceeding with our analysis, we checked the reliability of our scale items. All scale items reported Cronbach alpha > 0.8.

Examples of Social Media P-WOM Messages for both, MouthShut.com and the Blog are shown in Appendix 1 and 2 respectively. Out of the 12 treatment groups, 6 treatment groups received a Social Media P-WOM message and the remaining 6 received a Social Media N-WOM message. The participants had to indicate how positively or negatively the review evaluated the new brand of digital camera. Reviewer credibility was manipulated the same way as was done in Experiment 1. To make things more realistic, the names of actual social media websites were mentioned instead of saying high/low credibility sites. Having read the reviews, the respondents were asked to rate the general credibility of the reviews of the website or the website credibility. Similar scales were used for measuring the dependent variables of Perceived Risk and Attitude towards the brand.

Like the first experiment, we used Regression, Manova and Mancova analysis for the purpose of hypothesis testing. Before testing, we applied the Levene's test of homogeneity of variance and found the groups to be homogeneous.

The correlation analysis among independent variables suggested that problems associated with multi collinearity did not arise.

Manipulation Check

One-way ANOVA analysis ($F=991.5$, $p=0.000$) between high Reviewer Credibility ($M=5.72$) and low Reviewer Credibility ($M=1.91$) groups indicate that the manipulation for this factor worked as expected. One-way ANOVA analysis with $p=0.000$ between the Social Media P-WOM ($M=6.13$) and N-WOM ($M=1.38$) groups indicate that the manipulation for SWOM also worked as expected. One-way ANOVA analysis ($F=3.441$, $p=0.05$) between the blog (highest credibility: $M=4.60$), Mouthshut.com ($M=3.07$) and Facebook ($M=4.15$) indicate that the manipulation for Website Credibility worked as expected.

Analysis of Results

For analyzing the hypothesized relationships, we ran separate regression models with SWOM as an independent variable and Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase as dependent variables for all the respondents. The results show that SWOM has a significant negative impact on Perceived Risk ($\beta=-0.210$, $p=0.002$) and a significant positive impact on Attitude towards the brand ($\beta=0.288$, $p=0.000$) and Offline Intention to purchase ($\beta=0.2813$, $p=0.001$) and Online Intention to purchase ($\beta=0.194$, $p=0.004$). These support hypotheses H1, H2 and H3.

Table 11: Consequences of Social Media WOM in Experiment 2

Dependent Variable	Independent Variable	Beta	P-value	R ²	Adj. R ²
Perceived Risk	Social Media WOM	-0.210**	0.002	0.044	0.040
Brand Attitude	Social Media WOM	0.288**	0.000	0.083	0.079
Offline PI	Social Media WOM	0.213**	0.001	0.046	0.041
Online PI	Social Media WOM	0.194**	0.004	0.038	0.033
Confidence in PI	Social Media WOM	-0.099	0.141	0.010	0.005
** means $p < 0.005$; PI = Purchase Intention					

We then used the Baron & Kenny (1986) approach to test the mediation effect of Perceived Risk and Attitude towards the brand. We ran two regression analyses with Attitude towards the brand as the dependent variable. For the first regression, Perceived Risk ($\beta=-0.748$, $p=0.000$; Adj $R^2=0.557$) acted as the independent variable and for the second one, SWOM ($\beta=0.137$, $p=0.003$) and Perceived Risk

($\beta=-0.719$, $p=0.000$; $\text{Adj } R^2=0.573$) together acted as independent variables. As the effect of SWOM on Attitude towards the brand remains significant after controlling the Perceived Risk factor, we can conclude that Perceived Risk partially mediates the relationship between SWOM and Attitude towards the brand. This provides support for Hypothesis H4.

Table 12: Mediating Role of Perceived Risk in Experiment 2

Dependent Variable	Independent Variable	Beta	P-value	R ²	Adj. R ²
Brand Attitude	Perceived Risk	-0.748**	0.000	0.559	0.557
	Perceived Risk	-0.719**	0.000	0.577	0.573
	Social Media WOM	0.137**	0.003		
** means $p < 0.005$					

For testing the mediating role of Attitude towards the brand, we tested three regression models with Offline Intention to purchase as a dependent variable. For the first regression, Perceived Risk ($\beta=-0.373$, $p=0.000$; $\text{Adj } R^2=0.135$) acted as an independent variable; for the second regression, Attitude towards the brand ($\beta=0.402$, $p=0.000$; $\text{Adj } R^2=0.158$) acted as an independent variable and for the third regression, Perceived Risk ($\beta=-0.165$, $p=0.076$; $\text{Adj } R^2=0.166$) and Attitude towards the brand ($\beta=0.278$, $p=0.003$) together acted as independent variables. In the third model, mediation is supported as the effect of Attitude towards the brand on Offline Intention to purchase remains significant after controlling the factor of Perceived Risk. As the effect of Perceived Risk on Offline Intention to purchase becomes insignificant in this model, we can conclude that Attitude towards the brand completely mediates the relationship of Perceived Risk and Offline Intention to purchase. This provides support for our Hypothesis H5.

Table 13: Mediating Role of Brand Attitude in Experiment 2

Dependent Variable	Independent Variable	Beta	P-value	R ²	Adj.R ²
Offline Purchase Intention	Perceived Risk	-0.373**	0.000	0.139	0.135
	Brand Attitude	0.402**	0.000	0.161	0.158
	Brand Attitude	0.278**	0.003	0.174	0.166
	Perceived Risk	-0.165	0.076		
** means $p < 0.005$					

For Online Intention to purchase, we tested three regression models similar to that of Offline Intention to purchase. For the first regression, Perceived Risk ($\beta=-0.516$, $p=0.000$; Adj $R^2=0.263$) acted as an independent variable; for the second regression, Attitude towards the brand ($\beta=0.412$, $p=0.000$; Adj $R^2=0.166$) acted as an independent variable; and for the third regression, Perceived Risk ($\beta=-0.471$, $p=0.000$; Adj $R^2=0.261$) and Attitude towards the brand ($\beta=0.060$, $p=0.049$) together acted as independent variables. This suggests that Perceived Risk negatively effects Online Intention to purchase and Attitude towards the brand positively effects Online Intention to purchase. The difference in the regression coefficients of Perceived Risk with and without Attitude towards the brand indicates an indirect effect.

Table 14: Mediating Role of Brand Attitude in Experiment 2

Dependent Variable	Independent Variables	Beta	t-value	P-value	R ²	Adj.R ₂
Online Purchase Intention	Perceived Risk	-0.516**	-8.920	0.000	0.266	0.263
	Brand Attitude	0.412**	6.701	0.000	0.170	0.166
	Brand Attitude	0.060	0.691	0.490	0.268	0.261
	Perceived Risk	-0.471**	-5.401	0.000		
** means $p < 0.005$						

CONSEQUENCES OF SOCIAL MEDIA P – WOM AND

N - WOM

To test the impact of Social Media P-WOM and N-WOM on the consumer decision making variables, we performed the Mancova Analysis with Perceived Risk, Attitude towards the brand, Online and Offline Intention to purchase as dependent variables; SWOM as a fixed factor; and Reviewer Credibility, Website Credibility, Involvement Level and Product Knowledge as covariates.

The results of the Mancova Analysis revealed that Social Media P-WOM has a negative impact on Perceived Risk ($F = 10.632$, $p = 0.000$, $M = -0.208$) and a positive impact on Attitude towards the brand ($F = 20.419$, $p = 0.000$, $M = 0.281$), Offline Intention to purchase ($F = 11.641$, $p = 0.001$, $M = 0.224$) and Online Intention to purchase ($F = 9.037$, $p = 0.003$, $M = 0.192$). Thus, Hypotheses H1a, H2a and H3a are supported. Social Media N-WOM had a positive impact on Perceived Risk ($M = 0.213$) and a negative impact on Attitude towards the brand ($M = -0.289$), Offline Intention to purchase ($M = -0.230$) and Online Intention to purchase ($M = -0.197$). Thus, Hypotheses H1b, H2b and H3b are supported. For the factors of Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase, the impact of social media N-WOM is more significant than that of social media P-WOM. Hence, Hypotheses H11a, H11b and H11c are supported.

Table 15: Mancova Analysis for Social Media PWOM and NWOM Groups

Dependent Variable	Estimated Mean		Univariate F Test		Corrected Model		
	PWO M	NWO M	F Stats	p-value	Stats	p-value	R2
Perceived Risk	-0.208	0.213	10.632**	0.001	6.015*	0.000	0.123
Brand Attitude	0.281	-0.289	20.419**	0.000	8.266*	0.000	0.161
Offline PI	0.224	-0.230	11.641**	0.001	3.126*	0.010	0.068
Online PI	0.192	-0.197	9.037*	0.003	5.786*	0.000	0.119
Confidence in PI	-0.081	0.084	1.843	0.176	12.252**	0.000	0.222
Multivariate Effect of WOM Groups: Wilk's Lambda = 0.874, F = 6.063, p-value = 0.000 ** means p-value < 0.005 and * means p-value < 0.05; PI = Purchase Intention							

Role of Reviewer Credibility

To test moderation by Reviewer Credibility, we tested separate regression models for the high and low Reviewer Credibility groups keeping SWOM as independent and Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase as dependent variables.

The result indicates that when Reviewer Credibility is high, SWOM has a significant negative impact on Perceived Risk ($\beta=-0.530$, $p=0.000$) and a significant positive impact on Attitude towards the brand ($\beta=0.623$, $p=0.000$), Offline Intention to purchase ($\beta=0.376$, $p=0.00$) and Online Intention to purchase ($\beta=0.343$, $p=0.000$). But when Reviewer Credibility is low, SWOM has an insignificant impact on all four dependent variables. Thus, Reviewer Credibility positively moderates the impact of SWOM on Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase. Hence, Hypotheses H6a, H6b, H6c and H6d stand supported.

Table 16: Moderating Role of Reviewer Credibility in Experiment 2

Dependent Variable	Reviewer Credibility	Beta of WOM	t-value	p-value	R ²
Perceived Risk	Low	0.111	1.153	0.252	0.001
	High	-0.530**	-6.547	0.000	0.388
Brand Attitude	Low	-0.029	-0.296	0.768	0.001
	High	0.623**	8.354	0.000	0.388
Offline Purchase Intention	Low	0.039	0.399	0.691	0.001
	High	0.376**	4.253	0.000	0.141
Online Purchase Intention	Low	0.038	0.394	0.694	0.001
	High	0.343**	3.833	0.000	0.118
Note. ** means $p < 0.005$ and * means $p < 0.05$					

Role of Reviewer Credibility for P-WOM and N-WOM Groups

We conducted the Mancova Analysis with SWOM and Reviewer Credibility groups as fixed factors; Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase as dependent variables; and Social Media Website groups, Involvement Level and Product Knowledge as covariates, to assess differential impact of P-WOM/N-WOM on consumer decision making variables for high and low Reviewer Credibility.

Mancova was able to estimate the corrected model for all the four dependent variables, Perceived Risk ($F=11.297$, $p\leq 0.000$), Attitude towards the brand ($F=13.125$, $p\leq 0.000$), Offline Intention to purchase ($F=3.754$, $p\leq 0.001$) and Online Intention to purchase ($F=6.124$, $p\leq 0.000$). This indicates that Reviewer Credibility moderates the impact of P-WOM and N-WOM on consumer decision variables.

Table 17: Mancova Analysis for Reviewer Credibility in Experiment 2

Model Fit	Perceived Risk	Brand Attitude	Offline PI	Online PI
F Stats	11.297**	13.125**	3.754**	6.124**
p-value	0.000	0.000	0.001	0.000
R ²	0.241	0.269	0.095	0.147
Multivariate Effect of WOM Groups: Wilk's Lambda = 0.871, F = 6.226, p-value = 0.000				
** means p-value < 0.005; PI = Purchase Intention				

MODERATING ROLE OF SOCIAL MEDIA WEBSITES

To test moderation by Social Media Websites, we tested separate regression models for the three Social Media Website groups with SWOM as independent and Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase as dependent variables. The results indicate that SWOM has a significant negative impact on Perceived Risk for Blog ($\beta=-0.299$, $p=0.009$) and Facebook ($\beta=-0.258$, $p=0.027$) but it has an insignificant impact on Perceived Risk for MouthShut.com ($p>0.05$). SWOM has a significant positive impact on Attitude towards the brand for all three websites (Blog ($\beta=0.339$, $p=0.003$), Facebook ($\beta=0.271$, $p=0.020$), Mouthshut.com ($\beta=0.362$, $p=0.000$)).

For all three websites, SWOM has a positive impact on both Offline and Online Intention to purchase but only in the case of Facebook, the impact is significant (Offline PI: $\beta=0.330$, $p=0.004$; Online PI: $\beta=0.303$, $p=0.009$). Thus, Social Media Websites moderate the impact of SWOM on Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase. Hence Hypotheses H7a, H7b and H7c are supported.

Role of Type of Social Media Website for P/WOM Groups

To test moderation by the type of Social Media Website for Social Media P-WOM and N-WOM groups, we conducted the Mancova Analysis with SWOM and Social Media Websites as fixed factors; Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase as dependent variables; and Reviewer Credibility, Involvement Level and Product Knowledge as covariates, to find out how the impact of Social Media P-WOM/N-WOM on consumer decision making varies for different Social Media Websites. Mancova was able to estimate the corrected model for all the dependent variables (Perceived Risk ($F=3.858$, $p\leq 0.000$), Attitude towards the brand ($F=5.313$, $p\leq 0.000$), Offline Intention to purchase ($F=2.282$, $p\leq 0.023$) and Online Intention to purchase ($F=3.799$, $p\leq 0.000$)). The results indicate that the type of Social Media Website moderates the impact of Social Media P-WOM/N-WOM on consumer decision making.

Table 18: Mancova Analysis for Social Media Website in Experiment 2

Model Fit	Perceived Risk	Brand Attitude	Offline PI	Online PI
F Stats	3.858**	5.313**	2.282*	3.799**
p-value	0.000	0.000	0.023	0.000
R ²	0.127	0.167	0.079	0.125
Multivariate Effect of WOM Groups: Wilk's Lambda = 0.891, F = 6.399, p-value = 0.000				
** means p-value < 0.005 and * means p-value < 0.05; PI = Purchase Intention				

Role of Website Credibility

To test moderation by Website Credibility, we tested separate regression models for the high and low Website Credibility groups with SWOM as an independent variable and Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase as dependent variables. The result indicates that in case of high Website Credibility, SWOM has a significant negative impact on Perceived Risk ($\beta=-0.315$, $p=0.002$) and a significant positive impact on Attitude towards the brand ($\beta=0.373$, $p=0.000$), Offline Intention to purchase ($\beta=0.267$, $p=0.009$) and Online Intention to purchase ($\beta=0.320$, $p=0.0001$). But when Website Credibility is low, SWOM has a significant positive impact on Attitude towards the brand ($\beta=0.284$, $p=0.0001$) and Offline Intention to purchase ($\beta=0.203$, $p=0.023$) but an insignificant impact on Perceived Risk and Online Intention to purchase. For all four dependent variables, the impact of SWOM is stronger when Website Credibility is higher. Thus, Website Credibility positively moderates the impact of

SWOM on Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase. Hence, Hypotheses H8a, H8b and H8c are supported.

Role of Website Credibility for P/N-WOM Groups

To test the moderating role of Website Credibility for Social Media P-WOM and N-WOM groups, we conducted the Mancova Analysis with SWOM and Website Credibility groups as fixed factors; Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase as dependent variables; and Reviewer Credibility groups, Involvement Level and Product Knowledge as covariates, to find out how the impact of Social Media P-WOM/N-WOM on consumer decision making varies for high and low Website Credibility. Mancova was able to estimate the corrected model for all the four dependent variables (Perceived Risk ($F=5.317$, $p \leq 0.000$), Attitude towards the brand ($F=6.649$, $p \leq 0.000$), Offline Intention to purchase ($F=2.787$, $p \leq 0.012$) and Online Intention to purchase ($F=5.163$, $p \leq 0.000$)). The results indicate that Website Credibility (WC) moderates the impact of Social Media P-WOM / N-WOM on consumer decision making.

Table 19: Mancova Analysis for Website Credibility in Experiment 2

Model Fit	Perceived Risk	Brand Attitude	Offline PI	Online PI
F Stats	5.317**	6.649**	2.787*	5.163**
p-value	0.000	0.000	0.012	0.000
R ²	0.130	0.157	0.072	0.126
Multivariate Effect of WOM Groups: Wilk's Lambda = 0.873, F = 6.114, p-value = 0.000				
** means p-value < 0.005 and * means p-value < 0.05; PI = Purchase Intention				

Role of Product Knowledge

To test the moderation by Product Knowledge, we tested separate regression models for the two Product Knowledge groups with SWOM as an independent variable and Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase as dependent variables. The results indicate that when Product Knowledge is high, SWOM has a significant negative impact on Perceived Risk ($\beta=-0.276$, $p=0.006$) and a significant positive impact on Attitude towards the brand ($\beta=0.451$, $p=0.000$), Offline Intention to purchase ($\beta=0.364$, $p=0.00$) and Online Intention to purchase ($\beta=0.270$, $p=0.007$). But when Product Knowledge is low, SWOM has a significant negative impact on Perceived Risk ($\beta=-0.206$, $p=0.024$), a significant positive impact on Attitude towards the brand ($\beta=0.208$, $p=0.022$) and

an insignificant impact on Offline and Online Intention to purchase ($p > 0.05$). For all four dependent variables, the impact of SWOM is stronger when Product Knowledge is higher. Thus, Product Knowledge positively moderates the impact of SWOM on Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase. Hence, Hypotheses H9a, H9b and H9c are not supported.

Role of Product Knowledge for P/N-WOM Groups

To test the moderation by Product Knowledge for Social Media P-WOM and N-WOM groups, we conducted the Mancova Analysis with SWOM and Product Knowledge groups as fixed factors; Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase as dependent variables; and Reviewer Credibility, Social Media Website and Involvement Level as covariates, to find out how the impact of P-WOM/N-WOM on consumer decision making varies for high and low Product Knowledge. Mancova was able to estimate the corrected model for all the variables (Perceived Risk ($F=5.000$, $p \leq 0.000$), Attitude towards the brand ($F=7.886$, $p \leq 0.000$), Offline Intention to purchase ($F=3.603$, $p \leq 0.002$) and Online Intention to purchase ($F=4.885$, $p \leq 0.000$)). The results indicate that Product Knowledge moderates the impact of P-WOM/N-WOM on consumer decision making.

Table 20: Mancova Analysis for Product Knowledge in Experiment

Model Fit	Perceived Risk	Brand Attitude	Offline PI	Online PI
F Stats	5.000**	7.886**	3.603**	4.885**
p-value	0.000	0.000	0.002	0.000
R ²	0.123	0.181	0.092	0.120
Multivariate Effect of WOM Groups: Wilk's Lambda = 0.856, F = 7.093, p-value = 0.000				
** means p-value < 0.005; PI = Purchase Intention				

Role of Involvement Level

To test the moderation by Involvement Level, we tested separate regression models for the two Involvement Level groups with SWOM as an independent variable and Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase as dependent variables. The results indicate that when Involvement Level is high, SWOM has a significant negative impact on Perceived Risk ($\beta=-0.271$, $p=0.005$) and a significant positive impact on Attitude towards the brand ($\beta=0.343$, $p=0.000$), Offline Intention to purchase ($\beta=0.206$, $p=0.034$) and Online Intention to purchase ($\beta=0.297$, $p=0.002$). But when Involvement Level is low, SWOM has a significant negative impact on Perceived Risk ($\beta=-0.206$, $p=0.028$), a significant positive impact on Attitude towards the brand ($\beta=0.314$, $p=0.001$) and Offline Intention to purchase ($\beta=0.243$, $p=0.009$) and an insignificant impact on Online Intention to purchase ($p>0.05$). The impact of SWOM is stronger when the Involvement Level is higher for all dependent variables except for Offline Intention to purchase. Thus, Involvement Level positively moderates the impact of SWOM on Perceived Risk, Attitude towards the brand and Online Intention to purchase and negatively moderates the impact of SWOM on Offline Intention to purchase. Thus, Hypotheses H10a and H10b are supported but Hypothesis H10c is not supported.

Role of Involvement Level for P/N-WOM Groups

To test the moderation by Involvement Level for Social Media P-WOM and N-WOM groups, we conducted the Mancova Analysis with SWOM and Involvement Level groups as fixed factors; Perceived Risk, Attitude towards the brand, Offline and Online Intention to purchase as dependent variables; and Reviewer Credibility and Social Media Website groups and Product Knowledge as covariates, to find out how the impact of Social Media P-WOM/N-WOM on consumer decision making varies for high and low Involvement Level. Mancova was able to estimate the corrected model for all the four dependent variables (Perceived Risk ($F=5.067$, $p\leq 0.000$), Attitude towards the brand ($F=7.016$, $p\leq 0.000$), Offline Intention to purchase ($F=2.660$, $p\leq 0.016$) and Online Intention to purchase ($F=5.204$, $p\leq 0.000$)). The above results indicate that Involvement Level moderates the impact of Social Media P-WOM/N-WOM on consumer decision making.

Table 21: Mancova Analysis for Involvement Level in Experiment 2

Model Fit	Perceived Risk	Brand Attitude	Offline PI	Online PI
F Stats	5.067**	7.016**	2.660*	5.204**
p-value	0.000	0.000	0.016	0.000
R ²	0.124	0.164	0.069	0.127
Multivariate Effect of WOM Groups: Wilk's Lambda = 0.872, F = 6.179, p-value = 0.000 ** means p-value < 0.005 and * means p-value < 0.05; PI = Purchase Intention				

SUMMARY OF HYPOTHESIS TESTING FOR EXPERIMENT 2

Experiment 1 results provide support for all the hypotheses except Hypotheses H9a, H9b, H9c (all related to Product Knowledge) and H10c (moderation of SWOM and Intention to purchase relationship by Involvement Level). The simulation of Social WOM via an online survey and supplemented by real life image stimuli helped in the establishment of elements of Perceived Risk and the potential loss with the respondent group. As a result of this, the hypotheses related to these elements that had been rejected in the offline experiment were established in the online experiment. Summary of all hypotheses is presented in Table 22.

Table 22: Summary of all experiment results

Hypothesis	Experiment 1 (Offline)	Experiment 2 (Online)
Hypotheses 1, 1a, 1b	All Accepted	All Accepted
Hypotheses 2, 2a, 2b	All Accepted	All Accepted
Hypotheses 3, 3a, 3b	All Accepted	All Accepted
Hypotheses 4, 4a, 4b	All Accepted	All Accepted
Hypothesis 5	All Accepted	All Accepted
Hypotheses 6a, 6b, 6c	All Accepted	All Accepted
Hypotheses 7a, 7b, 7c	All Accepted	All Accepted
Hypotheses 8a, 8b, 8c	All Accepted	All Accepted
Hypotheses 9a, 9b, 9c	All Rejected	All Rejected
Hypotheses 10a, 10b, 10c	All except 10a Accepted	All except 10c Accepted
Hypotheses 11a, 11b, 11c	All Rejected	All Accepted

OVERALL DISCUSSION

We will now triangulate the findings of this study from the two experiments and link these to relevant literature in order to explain why corresponding relationships are supported or rejected.

In both the experiments, SWOM has a negative impact on Perceived Risk and a positive impact on Attitude towards the brand and Offline Intention to purchase. As noted earlier, the relationship between WOM and Perceived Risk is inconclusive (Chen & Xie, 2008; Woodside & DeLozier, 1976). We had argued that the reason for this was the imprecise/inadequate definition of WOM and Perceived Risk. SWOM may now be clearly defined as WOM messages on social media with a positive or negative valence (C. Park & Lee, 2009) and Perceived Risk as “a consumer's concern about the potential uncertain negative outcomes from the transaction” (J. Kim et al., 2009). Clarity in definitions help establish conclusive relationships between SWOM and Perceived Risk. In both the experiments, we found that SWOM negatively influences Perceived Risk and thus we are able to sort out the apparent confusion in the literature. The findings from both our experiments also support the hypotheses that SWOM positively influences Attitude towards the brand and Intention to purchase. This is in line with the existing literature and we have provided empirical evidence for such relationships (Dhar & Chang, 2009; Eagly & Chaiken, 1993; Maxham III, 2001).

For both experiments, SWOM has a significant negative impact on Perceived Risk which subsequently has a significant negative impact on Attitude towards the brand. Attitude towards the brand has a significant positive impact on Offline Intention to purchase. In joint effect models, the R^2 values indicated that these joint effect models are a better fit than individual models. When we tested the impact of SWOM and Perceived Risk together on Attitude towards the brand, both the variables had a significant impact on Attitude towards the brand. Thus, in both the experiments, the Perceived Risk partially mediates the impact of SWOM on Attitude towards the brand. When we tested the impact of Attitude towards the brand and Perceived Risk together on Offline Intention to purchase, both the variables had a significant impact on Offline Intention to purchase in Experiment 1 but in Experiment 2, only Attitude towards the brand had a significant impact on Offline Intention to purchase. Thus, it can be advocated that, in both the experiments, Attitude towards the brand mediates the impact of Perceived Risk on Intention to purchase.

In Experiment 1, there is partial mediation and in Experiment 2, there is full mediation. As Attitude towards the brand plays a mediating role in both the experiments, Hypothesis H5 is also supported. Existing literature suggests that Perceived Risk will have an inverse relationship with Attitude towards the brand (Kim & Prabhakar, 2000) and our findings support such arguments. According to

the Theory of Planned Behavior and Reasoned Action, attitude should lead to intention (Ajzen, 1991; Fishbein & Ajzen, 1977). Our findings provide empirical support for this theory. There were other studies which expounded a positive relationship between Attitude towards the brand and Intention to purchase (Chang & Chen, 2008; J. Park et al., 2005; Pires et al., 2004) and our findings extend the validity of these findings to the social media context.

Reviewer Credibility positively moderates the impact of SWOM on Perceived Risk, Attitude towards the brand and Intention to purchase for both the experiments. As per Source Credibility Theory, a source with higher credibility will have a more powerful impact on the receiver (Beebe & Beebe, 2009). Our experiments have proved that Source Credibility plays a very important role in the social media communication context because of the absence of a face-to-face interaction (Danah M Boyd & Ellison, 2007; v. Wangenheim & Bayón, 2004). Our results are also in line with those established by Hussain et al. (2017) who established a significant effect of different dimensions of source credibility on perceived risk. Our findings thus provide empirical support for Source Credibility Theory even in the case of SWOM.

Website Credibility positively moderates the impact of SWOM on Perceived Risk, Attitude towards the brand and Intention to purchase for both the experiments. Extant literature asserted that the credibility of different social media websites is different (Bickart & Schindler, 2001; Singh et al., 2008). In the case of Social Media, the WOM website along with the review writer acts as the source of the WOM message. We used the Source Credibility Theory (Beebe & Beebe, 2009) to propose that Website Credibility will positively influence the impact of SWOM. Our findings from both the experiments supported our arguments by providing empirical support for the same. These findings are in line with findings of Hsieh & Li (2020) that credibility of source positively influences receiver's attitude and subsequent behavior.

In terms of receiver characteristics, findings from both the experiments indicate that Product Knowledge does moderate the impact of SWOM on consumer decision making, the direction of moderation being positive and not negative.

However, in our research model, we had proposed that Product Knowledge will negatively moderate the impact of SWOM on the consumer decision making variables of Perceived Risk, Attitude towards the brand and Intention to purchase.

Our findings establishing the moderating role of Product Knowledge is in line with existing literature (Carlson et al., 2009; Moorman et al., 2004) but the valence of moderation is opposite to what we had proposed. In a study of the purchase decision of durable consumer goods, Sundaram & Webster (1999) found that the influence of WOM was higher when the consumers were unfamiliar with the brand. However, Jones et al. (2009) reported that the impact of Product Knowledge of the

consumer varies based on prior experience and may differ for different consumer decision making variables. ELM and Heuristic-Systematic Model of Information Processing suggests that a high level of knowledge and resulting improved ability of consumers to evaluate will result in central processing of information whereas a low level of knowledge will lead to peripheral processing. We predicted that in case of low Product Knowledge, consumer will use peripheral processing resulting in a greater impact of SWOM but our findings indicate that the impact of SWOM is more in the case of consumers with high Product Knowledge. However, before concluding regarding the nature of influence of Product Knowledge, we need to be certain about the role other factors play. Sample profile and confounding of the impact of Product Knowledge and Involvement Level might be alternative reasons for the rejection of the hypotheses related to Product Knowledge.

Thus, all future experiments should check the profile of the consumers with regard to prior experience before testing for the impact of Product Knowledge on Intention to purchase.

The Involvement Level positively moderated the impact of SWOM on Attitude towards the brand in both the experiments. Additionally, in Experiment 2, the Involvement Level positively moderated the impact of SWOM on Perceived Risk and Online Intention to purchase. But contrary to our expectation, the Involvement Level negatively moderated the impact of SWOM on Perceived Risk in Experiment 1 and negatively moderated the impact on Offline Intention to purchase in Experiment 2. Our claim that the Involvement Level will moderate the impact of SWOM, is in line with existing literature (Dholakia, 1997; Zaichkowsky, 2010) but our findings about the valence of such relationships are inconclusive.

Further, the Involvement Level positively moderated the impact of SWOM on Attitude towards the brand but for Perceived Risk and Intention to purchase, the moderating impact of Involvement Level was not conclusive. ELM and Heuristic-Systematic Model (HSM) of Information Processing suggests that in cases of high involvement consumers will search for more information while in cases of low involvement, they will base their decisions on peripheral cues.

We had predicted that consumers with a high Involvement Level will use central processing. In such cases, impact of SWOM will be higher, but our findings indicate that such processing may not have uniform impact on different consumer decision making variables like Perceived Risk and Intention to purchase.

Sample profile and the confounding impact of Product Knowledge and Involvement Level might be alternative reasons for the rejection of Hypotheses H10a in Experiment 1 and H10c in Experiment 2.

In both the experiments, Social Media P-WOM has a significant negative impact on Perceived Risk and a significant positive impact on Attitude towards the brand and Offline Intention to purchase. Also, in both the experiments, Social Media N-

WOM has a significant positive impact on Perceived Risk and a significant negative impact on Attitude towards the brand and Offline Intention to purchase.

It was seen in Experiment 2 that an online scenario with image stimulus highlighted the impact of Social Media N-WOM more than that of Social Media P-WOM for all dependent variables. Research in marketing regarding the search behavior of consumers for information point out that, in time-constrained situations, consumers give more weightage to negative information (Hauser et al., 1993). Our findings in the second experiment corroborate the literature that infers that, in a time constrained situation, Social Media N-WOM has more impact than P-WOM on decision making variables like Perceived Risk, Attitude towards the brand and Intention to purchase. This provides extrapolation to the theory of negativity bias in the context of SWOM.

CONTRIBUTION AND IMPLICATIONS

The results of this study indicated that Social Media P-WOM and N-WOM have differential effects on the consumer decision making process. The study also established the application of the concept of ‘negativity bias’ in the context of SWOM. As an important contribution, we also explored the role of Source Credibility for negative information which had not been hitherto studied extensively in the existing literature. Further, we extended the Source Credibility Theory to social media websites to understand how these websites and their credibility influence the impact of SWOM. We were able to provide empirical support to such relationships. We also enhanced the literature by highlighting role of Product Knowledge and Involvement Level in the context of SWOM.

From a managerial perspective, the study provides empirical evidence on the significance of SWOM on consumer decision making. This calls for managers to devote additional resources for monitoring SWOM messages related to specific campaigns or products or to the company overall. The usage of listening tools for gauging social media sentiment might help in understanding as well as responding to online WOM. It would be prudent for managers to actively engage with reviewers and websites of high credibility to improve their SWOM influence.

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