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Purchasing natural personal care products in the era of fake news? The moderation effect of brand trust

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ABSTRACT

Natural personal care products are gaining popularity due to their benefits in terms of health and well-being. However, consumers are wary of these products and are guided by the fake news circulating about them. Since natural product consumption offers several personal and environmental benefits, it would be worthwhile to understand consumers' tendency to let fake news influence their consumption decisions. Accordingly, the current study examined the association of fake news and purchasing behaviour towards natural personal care products, utilising Stimulus-Organism-Behaviour-Consequence (SOBC) as the theoretical framework. The study proposed openness to change as the stimulus, perceived benefits and perceived risks as organismic internal states, purchase intentions as the behaviour, and the propensity of believing and acting on fake news as the consequence, which is further associated with system trust. The model was tested by analysing data collected from 390 existing consumers, considering the moderation effect of brand trust and controlling the effect of age and gender. The findings confirmed that openness to change is associated with perceived benefits and risks. Furthermore, perceived benefits and system trust are associated with purchase intentions, which are, in turn, associated with the propensity of believing and acting on fake news. The study presents several novel contributions to theory and practice.

1. Introduction

Personal care products are used to maintain personal hygiene and physical appearance as well as to improve the health and well-being of individuals by protecting them against various diseases (Shaaban and Alhajri, 2020). These products, comprising skincare, haircare, oral care, colour cosmetics, deodorants, toiletries, and feminine hygiene products (Ghazali et al., 2017), are widely used in every household by individuals of all age groups, gender, economic strata, and ethnicity. The use of personal care products is rising since individuals are increasingly becoming aware of how these products can address various hygiene-related problems (Klaschka, 2016a). At the same time, consumers are becoming more concerned about the content and side effects of conventional personal care products (Klaschka, 2016b). Consequently, consumers are keen to adopt and use natural personal care products as a safer alternative to conventional personal care products (Carvalho et al., 2016; Ghazali et al., 2017).

Natural personal care products are perceived to only contain natural elements or ingredients (Moscato and Machin, 2018). However, scholars have argued that there is no agreed-upon or set legal definition of natural products that can be used by natural product firms on their product labels (Chambers and Castro, 2018). Natural personal care products are thus interpreted as being naturally processed materials that are free from artificial or synthetic colour, additives, or ingredients (Klaschka, 2016a; Siegrist and Sütterlin, 2017). Unlike synthetic personal care products, which can cause eye irritation, throat and nose infection, skin rashes, and even cancer in some cases (Shaaban and Alhajri, 2020), natural personal care products are perceived to offer safety from

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infections and give consumers the mental satisfaction of using products that contain only natural ingredients (Sinha and Verma, 2020). This perception has led to an increase in demand for natural personal care products (Manová et al., 2013).

The growth in demand for natural products in the personal care segment has motivated global companies, such as L'Oréal SA, Unilever, Avon Products, and Procter & Gamble, among others, to include natural personal care products in their product range (The Good Trade, 2020). Moreover, organizations across the globe, such as the Food and Drug Administration (FDA) in the USA, have laid out strict rules and regulations for the production and labelling of personal care products in general (Carvalho et al., 2016), which has been motivating manufacturers to develop more personal care products with natural ingredients (Ghazali et al., 2017). This rising interest in these products is testified by the reports that the global market for natural personal care products, currently over USD 13 billion in size, is expected to grow at more than 10% annually to reach a value of more than USD 20 billion by 2025 (Adroit Market Research, 2020). There is no doubt that the size of the market for natural products is increasing, yet if we put it in perspective by comparing it with the world population, the realization dawns that a significant portion of the population is still using conventional personal care products (Matić and Puh, 2016; Sinha and Verma, 2020). Indeed, a recent report has suggested that nearly 60% of the population acknowledge that conventional personal care products are unsafe, and 92% of consumers have been demanding strict guidelines for the ingredients that can be used in synthetic personal care products (Persistence Market Research, 2020). However, despite acknowledging these issues, the vast majority of consumers have yet to adopt natural personal care products as a safer alternative.

The increased conversation around natural personal care products and the heightened global awareness regarding them have transmitted to the domain of research, wherein scholars have focused mainly on common knowledge of natural products (Kooijmans and Flores-Palacios, 2014), motivation to purchase natural products (Moscato and Machin, 2018), and the impact of naturalness of ingredients on the environment (Klaschka, 2016a, 2016b, 2016b). However, as observed in the preceding discussion, despite offering multiple benefits (Kumar et al., 2021a), natural products have not witnessed increased acceptance, use, and intentions to purchase as anticipated, indicating a need for a deeper examination of varied factors associated with consumers' decision-making.

In this context, despite the growing discussion in media around fake news in the health and beauty products industry (de Regt et al., 2019), not much is known about how fake news interacts with consumers' decision-making related to natural personal care products. Herein, fake news implies false, often sensational information disseminated under the veil of authentic reporting (Fedeli, 2020). The extant literature in this area has remained largely focused on the motivation behind sharing fake news (Talwar et al., 2019; Talwar et al., 2020), the detection and propagation of fake news (Papanastasiou, 2020), the characteristics of fake news (Zhang and Ghorbani, 2020), and its impact on politics (Papanastasiou, 2020; Zhang and Ghorbani, 2020), tourism (Fedeli, 2020), and brands or companies (Visentin et al., 2019). In comparison, there are no studies to our knowledge examining fake news in the context of natural personal care products. There is no doubt that, like all other brands, fake news being spread about natural products can be quite detrimental for the business that creates them. This is because consumers tend to use natural personal care products to derive benefits associated with their naturalness. When such consumers are subjected to fake news about the negative consequences of these products or their contents (e.g., hair fall increases after using the natural products), they can be expected to believe these falsely circulated claims and contemplate disengaging with the concerned product immediately.

Based on the above discussion, we argue that two visible gaps exist in the literature related to consumer behaviour towards natural personal care products: (a) there are limited insights that help explain the varied consumer response towards these products, and (b) the potential role of fake news in consumers' decision-making for these products has remained completely underexplored despite media reports of the menace that misinformation related to personal care products poses.

We contend that examining these under-researched aspects of consumers' behaviour towards natural personal care products can better explicate the underlying psychological mechanisms that are associated with their purchase intentions. We thus seek to identify and examine potential drivers of consumer intentions towards natural personal care products and the potential role of fake news in the consumers' decision-making. In this regard, we reviewed the prior literature on natural products and pro-environmental behaviour to identify the variables that would help us better understand the factors associated with consumers' purchase intentions towards these products. The prior findings have provided us with a basis to consider the potential role of openness to change (e.g., Labrecque et al., 2017), perceived benefits (e.g., Westaby, 2005), and perceived risks (e.g., Westaby, 2005) as antecedents of purchase intentions, and the propensity of believing and acting on fake news as its consequent. Since we propose to explore the propensity of believing fake news, we also identified brand trust and system trust as additional variables that may better explicate the behaviour of consumers towards natural products. This is based on the prior findings, which suggest that system trust implies belief in a regulatory framework (Gleim et al., 2019), which can be expected to have an impact on consumers' propensity of believing and acting on fake news that is being circulated about these products. Similarly, brand trust, which represents the confidence that the consumers have in a brand or firm (Chen and Cheng, 2019), can also be expected to impinge upon consumers' propensity of believing and acting on product-related fake news. Specifically, we propose to address three **research questions (RQs)**: **(1)** How are openness to change, perceived benefits, and perceived risks associated with purchase intentions towards natural personal care products? **(2)** How are purchase intentions and system trust associated with the propensity of believing and acting on fake news? and **(3)** How does brand trust moderate the association of intentions with its antecedents and consequents?

The conceptual model underlying the proposed research questions is based on the theoretical lens of the Stimulus-Organism-Behaviour-Consequence (SOBC) framework (Davis and Luthans, 1980). SOBC explains the interactive relationship between stimuli (S), the internal state of individuals (O), behavioural response (B), and consequential actions (C) (Talwar et al., 2021). Of the identified variables, the study employs openness to change as a stimulus, perceived benefits and perceived risks as the internal states of consumers, purchase intentions as their behaviour, and the propensity of believing and acting on fake news as the consequential actions. We have extended the original tenets of SOBC to conceptualise the role of system and brand trust. We tested the proposed model by analysing data collected from 390 consumers of a leading brand of natural personal care products in India.

The study makes three novel contributions. First, the study is the maiden empirical work to conceptualise the behaviour of consumers of natural personal care products using the SOBC framework. Since consumers are increasingly gravitating towards perceived healthy consumption choices, the use of such a comprehensive framework can provide an improved understanding of their behaviour in this space. Second, the research focuses on India's natural personal care market, offering newer insights from a developing country perspective. Third, the study shifts focus onto how consumers tend to misguidedly perceive fake news about their trusted brand, are lured into a false sense of rightness by their trust in the system, and end up initiating brand switching, or perhaps more damagingly, product switching behaviour. These findings are critical for marketers and academicians to understand the factors responsible for the fluctuating consumer response to natural personal care products.

2. Theoretical underpinnings

2.1. Stimulus-Organism-Behaviour-Consequence (SOBC) framework

The current study has developed a research model that is based on the Stimulus-Organism-Behaviour-Consequence (SOBC) framework. This framework, proposed by Davis and Luthans (1980) to explain the complex mechanisms of human behaviour, is an amalgamation and extension of the SOR (stimulus-organism-response) framework (Mehrabian and Russell, 1974) and the ABC (antecedent-behavior-consequence) framework (Skinner, 1963). A derivative of the social learning theory as well, the SOBC states that the many features of the environmental stimuli (S) influence the internal states of the individuals or organisms (O), which in turn, drive their behavioural responses (B) and lead to fortuitous consequences (C), resulting from those responses (Talwar et al., 2021). The processes defined by the SOBC framework further recognise the development of attitude, inclinations, information-seeking, and decision-making outcomes (Talwar et al., 2021).

Researchers have utilised SOBC or its related framework to understand consumer decision-making in various contexts, such as education (Whelan et al., 2020), evaluating reviews (Bigne et al., 2020), tourism (Kim et al., 2020), learning environment (Zhai et al., 2019), academic performance (Fu et al., 2020), and the sharing economy (Chi et al., 2020). Some of these studies (e.g., Bigne et al., 2020; Whelan et al., 2020) have investigated the associations between multiple antecedents or stimuli (S) and consequential purchase intentions (B), indicating the suitability of SOBC to examine intentions.

However, the framework has seen limited applications in the context of purchase intentions towards natural personal care products. Furthermore, it has never been utilised to examine the risks of fake news received from various sources.

The SOBC framework is well-suited for our study for two main reasons: First, SOBC delineates the interactions among its components, thereby explaining the disparity in consumers' internal states originating from stimuli and impacting their purchase intentions as well (Bigne et al., 2020; Whelan et al., 2020). Due to this, we expect it to provide an improved theoretical understanding of the mechanism that drives the intentions towards natural personal care products. Second, the SOBC framework provides a basis to conceptualise the consequences of behaviour, i.e., by enabling researchers to contemplate the outcome of a behavioural choice to better explicate consumer behaviour beyond the purchase decision. In the present context, such theoretical depth enables us to theorise how purchase intentions towards natural personal care products interact with consumers' propensity of believing and acting on fake news.

2.2. Extending the SOBC paradigm to the current context

The present study proposes consumers' openness to change as an antecedent of the benefits and risks perceived to be associated with using natural personal care products, which, in turn, are associated with purchase intentions. Finally, intentions are theorised to be associated with a consequent in the form of the propensity of believing and acting on fake news. These associations are grounded in the SOBC framework. To begin with, we have utilised openness to change, a value proposed by Schwartz and Bardi (2001) as stimulus (S). This is in consonance with prior studies (e.g., Claudy et al., 2015; Gupta and Arora, 2017) that have considered openness to change as a stimulus because individuals' values directly influence their reasoning for exhibiting a given behaviour. In a similar vein, Schwartz (2006) also indicated that values, such as openness to change, are motivational constructs that stimulate an individual to attain a goal. The use of 'openness to change' as the stimulus is also relevant in the present context since consumption of natural products requires a change from the routine of consuming traditionally popular products and the increasing awareness of consumers about personal and familial hygiene (Luomala et al., 2020). This is likely to make them open to using these products, thereby acting as a stimulus for the organismic perception of natural personal care products.

Next, drawing upon the behavioural reasoning perspective (Westaby, 2005), we have utilised both the reasons for and against a particular behaviour to represent the organismic or internal state (O). This is in concordance with prior findings, which revealed that openness to change is associated with consumers' internal state, which could be in favour of or against the adoption of any new product or service, such as micro wind turbines or car sharing (Claudy et al., 2015). In the present study, we have proposed perceived benefits associated with natural personal care products as the reasons for and the perceived risks associated with them as the reasons against, which are simultaneously associated with consumers' behavioural decisions. Herein, we argue that the reasons that motivate consumers to perceive natural products as being beneficial are the absence of any artificial or synthetic means of manufacturing (Ghazali et al., 2017; Luomala et al., 2020); the natural and nutritional content of products (Schrank and Running, 2018); and the general perception of associating natural products with authenticity, well-being, and health (Moscato and Machin, 2018). This is in agreement with prior studies that have suggested that the naturalness or natural content is associated with a positive disposition towards natural product brands (e.g., Kumar et al., 2021a).

Moving on, we have measured the reasons that cause consumers to have a negative view of natural personal care products through perceived risk. Herein, the reasons that may cause consumers to perceive natural products to be risky could be availability (Hyun et al., 2021) and the difficulty in determining the authenticity of their claims that they are chemical-free and comprise only natural ingredients (Sadgrove, 2021). The reasons that cause consumers to perceive natural products negatively may also include barriers, such as usage and image barriers, which may act as inhibitors of consumers' positive intentions towards natural products (Kumar et al., 2021a). In addition, this study utilises purchase intentions (PI) to represent behaviour (B), which captures consumers' responses to stimuli and internal organismic states. This is in consonance with previous studies that have used intentions to theorise the behavioural responses of consumers (Suparno, 2020). Since purchase intentions are an expression of the positive intent of consumers to execute the actual purchase, purchase intentions are conceptualised in the present context to measure consumers' positive inclination towards natural personal care products, as stimulated by openness to change and shaped by an understanding of their perceived benefits and risks.

Finally, the study proposes the propensity of believing and acting on fake news as a consequence (C) of purchase intentions as a behaviour (B), implying that positive purchase intentions may cause consumers to think that any news they receive about these products is true and then acting accordingly. This may further be interpreted to state that the consumer who thinks positively about natural personal care products and holds positive intentions towards them would tend to think that if any news (positive or negative) is available about these products, it is bound to be authentic. Thus, they might act on it, thinking it to be true, even if it is fake. We have conceptualised consumers to have such a propensity based on a variable called 'system trust', which in the current context represents the faith or trust they have in the regulators and existing rules (Nuttavuthisit and Thøgersen, 2017) to ensure that natural personal care products are manufactured as claimed. Therefore, if any news is circulating about a problem caused by a natural product, then consumers would perceive it to be true and trustable. Furthermore, we have also drawn upon the concept of system trust to conceptualise that consumers with trust in Government would believe that the Government would not let any unauthenticated news circulate. Thus, even if news falsely criticising a natural product is circulating, consumers would think it is true and act on it. In addition, we have also posited that such trust in the system would cause consumers to have higher purchase intentions, as guided by the fact that the government/regulators will make

sure that these products give all benefits as perceived and claimed. Thus, we extended the SOBC by theorising the influence of an external variable (system trust) on both behaviour and consequence. Such an extension allows us to posit that an external stimulus may act in the SOBC framework in more than one way.

Finally, we drew upon the consumer behaviour literature, particularly recent studies on natural products (e.g., Zhang and Zhou, 2019), to identify brand trust as another variable that could potentially enhance or diminish the association of intentions with its antecedents and consequents. Thus, we proposed the moderation effect of brand trust on the association of internal states with intentions and intentions with the propensity of believing and acting on fake news. This is in consonance with prior findings that provide evidence in support of the role of brand trust in building the faith of consumers. For instance, Ngo et al. (2020) found that brand trust contributed significantly to building consumer trust in food safety. In addition, to better explicate the complex mechanism that drives consumer behaviour, we also posited and examined the mediation effect of intentions on the association of system trust with the propensity of believing and acting on fake news. Thus, we extended the SOBC by underscoring the potential effect of moderating and mediating variables that underlie consumers' response to a product or service. The operational description of all seven SOBC constructs utilised in the study is presented in Table 1.

Table 1
Brief description of constructs.

SOBC dimensions	Study constructs	Brief description	Relevant studies
Stimuli	Openness to Change (OTC)	Openness to change refers to a value that stimulates individuals to seek and try new products, such as natural personal care products	Claudy et al. (2015); Mainardes et al. (2017); Schwartz (1992); Wang et al. (2008)
Organism	Perceived Benefits (PB)	It refers to the potential gains that an individual receives while consuming natural personal care products, such as good health, easy availability, and natural ingredients	Claudy et al. (2015); Gupta and Arora (2017); Westaby (2005)
	Perceived Risks (PR)	It refers to the potential threats in which it is difficult to establish authenticity, chemical-free, and only natural ingredient claims of natural personal care products	Claudy et al. (2015); Gupta and Arora (2017); Westaby (2005)
Behaviour	Purchase Intentions (PI)	It indicates the likelihood or intentions to buy natural personal care products and is strongly related to actual purchase behaviour	Martins et al. (2019); Hsu and Lin (2015); Kumar and Sadarangani (2018);
Consequences	The Propensity of Believing and Acting on Fake News (PBAFN)	It indicates the likelihood of individuals to believe and act on fake news when they encounter such news pertaining to natural personal care products	Chen and Cheng (2019); Fedeli (2020); Papanastasiou (2020); Talwar et al. (2019); Visentin et al. (2019);
Additional variables	System Trust (ST)	It represents the confidence that individuals have in the Government to control and maintain the standards of personal care products.	Gleim et al. (2019); Nuttavuthisit and Thøgersen (2017); Noblet and Teisl (2015)
	Brand Trust (BT)	It refers to the confidence in the brand to adhere to reliable and desired standards for manufacturing natural personal care products.	Chaudhuri and Holbrook (2002); Bhandari and Rodgers (2018); Chen and Cheng (2019)

3. Research model and hypothesis development

The study utilises openness to change as a stimulus, perceived benefit and risk as individuals' internal state, purchase intentions as behaviour, and the propensity of believing and acting on fake news as a consequence (Fig. 1). In addition, the model also proposes system trust as an antecedent of intentions and the propensity of believing and acting on fake news. Furthermore, in the proposed model, we have also conceptualised brand trust as a moderating variable, intentions as a mediating variable, and age and gender as control variables.

3.1. Purchase intentions and fake news

Purchase intentions refer to the likelihood of buying a product or service (Martins et al., 2019). Scholars have argued that purchase intentions reflect the actual buying behaviour (Hsu and Lin, 2015) and that individuals with high intentions to buy are considered loyal to the brand (Foroudi et al., 2018). The present study posits that higher purchase intentions towards natural personal care products indicate that consumers perceive natural personal care products to be authentic, due to which if they come across any news about problems with the ingredients or contents of these products, they would show a propensity to believe in that news, despite there being a possibility of its being fake. Our speculation is grounded in the fact that consumers with high purchase intentions think very positively about the product, and if there is any news contrary to their estimation, consumers tend to believe it, whether false or not. In other words, consumers with high purchase intentions are likely to believe and act more positively on fake news by disengaging with the associated natural personal care product brands. Thus, we hypothesise:

H1. Consumers' purchase intentions for natural personal care products are positively associated with their propensity of believing and acting on fake news.

3.2. Perceived benefits and risks

Perceived benefits represent the favourable reasons (Elhoushy et al. (2020) and perceived risks represent the unfavourable reasons (Lee, 2020) that consumers weigh while making their product/service choices. Notably, the perception of the reasons for and against is not restricted to a cost or monetary analysis; rather, it includes broader explanations of facilitating and inhibiting factors (Tandon et al., 2021; Talwar et al., 2021; Westaby, 2005). Since scholars have argued that a clearer understanding of benefits and risks associated with any product/service help individuals feel more comfortable in making related decisions (Gupta and Arora, 2017), we contend that consumers' perception of benefits and risks associated with natural personal care products are important factors associated with their purchase intentions. In consonance, we posit that purchase intentions towards natural personal care products are associated simultaneously with perceived health and other benefits, on the one hand, and the worries about the

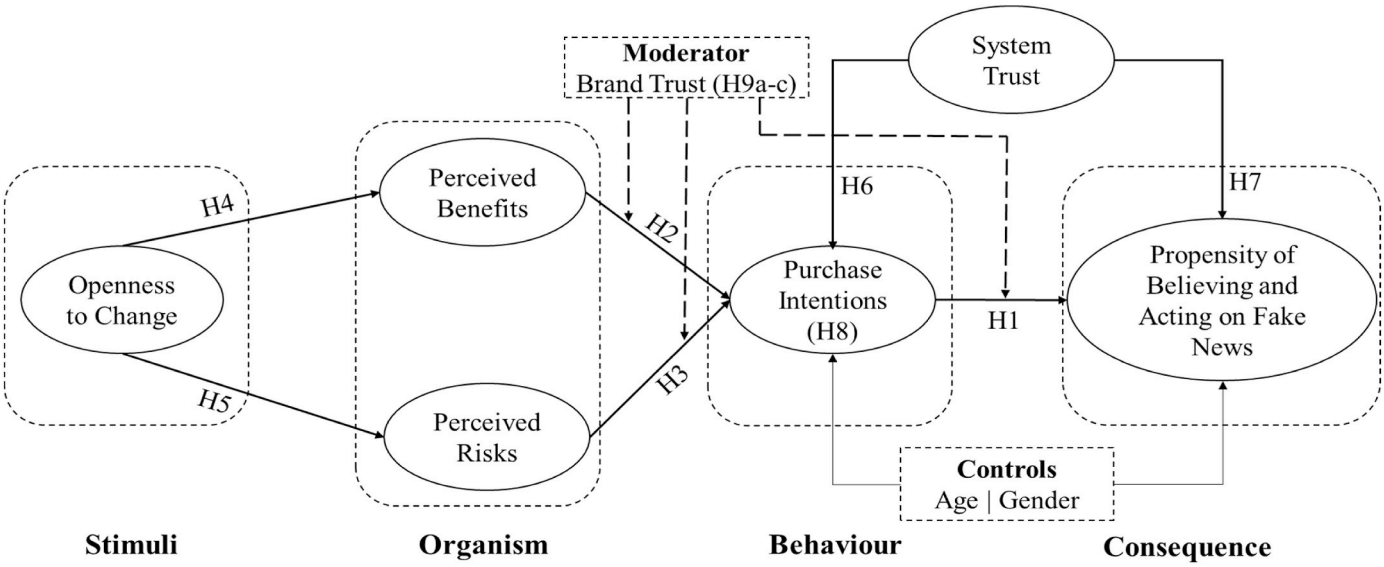

Fig. 1. Conceptual model.

authenticity of various claims made by the manufacturers of these products, on the other hand. Thereby, consumers with higher perceived benefits are more likely to show more positive purchase intentions as they have rational reasons to be positively disposed towards buying these products. In contrast, consumers with higher perceived risks are likely to exhibit low purchase intentions as they would be predisposed to avoid the risks associated with natural personal care products. Hence, we hypothesise:

H2. Consumers' perceived benefits of using natural personal care products are positively associated with their purchase intentions.

H3. Consumers' perceived risks of using natural personal care products are negatively associated with their purchase intentions.

3.3. Openness to change

Openness to change refers to a personal value that stimulates and induces the desire to engage in independent actions (Harmel and Yeh, 2019). It is a motivational value that consists of stimulation and self-direction (Bilsky and Schwartz, 1994). Openness to change motivates consumers to adopt new products (Schwartz, 1992) and directly influences their anticipated behaviour (Claudy et al., 2015). Scholars have explored and confirmed this linkage in various contexts. For instance, Vieira et al. (2013) indicated that food consumption is associated with openness to change as it allows the manifestation of identity and positive self-image. Hansen et al. (2018) indicated that openness to change is associated with consumption when consumers assess the benefits and risks of using any product/service. Furthermore, scholars argue that understanding the perceived benefits or risks is expected to be influenced by deep-rooted values (Westaby, 2005). Although there is no a priori basis for this supposition, the preceding discussion on the association of openness to change with consumers' decision-making based on their perception of benefits and risks provides us with sufficient rationale to anticipate that consumers' openness to change will be associated with their perception of benefits and risks of using natural personal care products. Herein, we posit that consumers with greater openness to change are more likely to assess the perceived benefits and risks, given that their self-directed behaviour would motivate them to make such an evaluation before exhibiting a behaviour. Thus, we hypothesise:

H4. Consumers' openness to change is positively associated with their perceived benefits of using natural personal care products.

H5. Consumers' openness to change is positively associated with their perceived risks using natural personal care products.

3.4. System trust

System trust refers to the confidence of individuals in the existing rules and regulations (Nuttavuthisit and Thøgersen, 2017). In the context of consumer behaviour, system trust has been noted to be the reason behind why products are accepted easily by consumers when they have been accepted by a third party, especially by Government or public authorities (Sreen et al., 2020). Previous studies have confirmed the role played by the government institutions or systems in developing favourable attitudes towards the concerned products, which further results in improved purchase intentions (Gleim et al., 2019; Kumar and Sreen, 2020). Although no prior studies have examined the association of system trust with purchase intentions in the context of natural personal care products, given the focus of natural products on authentic, safe, and natural content, it is plausible to anticipate that system trust will improve consumers' purchase intentions towards these products. This implies that consumers would have faith that the Government is ensuring that the natural personal care products in the market are appropriate and fit for use, which would enhance their purchase intentions. In other words, consumers with high system trust are more likely to have higher purchase intentions, as they believe that natural personal care products reach the market only after compliance with strict rules set by the Government. Furthermore, they believe that the system will not let them buy any product unless they deem it fit for consumption. Thus, we hypothesise:

H6. Consumers' system trust is positively associated with their purchase intentions towards natural personal care products.

If any product is certified by the Government or public authorities, consumers believe the product to be genuine (Gleim et al., 2019). This is because consumers have an innate belief that the system will not allow any firm to take unnecessary advantage of them (Paramasivan, 2016). Furthermore, consumers with high system trust perceive that the system is likely to take some action in case of any irregularity (Nuttavuthisit and Thøgersen, 2017). Extrapolating this to the present context, we expect that consumers will believe that the Government will act to stop the spread of fake news related to natural personal care products. This can be argued to imply that consumers may have a propensity of believing and acting on fake news, thinking it to be true and thus reliable. In other

words, high system trust will expose consumers to a greater risk of trusting fake news by increasing their tendency to believe in it. Based on the preceding argument, we anticipate that system trust will increase the propensity of believing and acting on fake news related to natural personal care products. Thus, we hypothesise:

H7. Consumers' system trust is positively associated with their propensity of believing and acting on fake news circulating about natural personal care products, which they trust to be true.

3.5. Mediating effect of purchase intentions

In addition to investigating the direct effect in the hypothesised relationships, the study also examined the mediating role of purchase intentions. Prior studies have examined both the direct (e.g., Reimer and Benkenstein, 2016) and mediation effect of purchase intentions (e.g., Lim et al., 2016). In this study, we posit that purchase intention is likely to mediate the relationship between system trust and the propensity of believing and acting on fake news. System trust, which indicates trust in the Government, provides an assurance to consumers about the standards being followed for natural personal care products, which may strengthen the intentions to purchase them. In addition, consumers with greater intentions to buy natural personal care products are more likely to be more sensitive to news pertaining to such products. Thus, it is quite possible that system trust is not only associated directly with the propensity of believing and acting on fake news but also acts indirectly through purchase intentions. Thus, we propose:

H8. Consumers' purchase intentions mediate the association between system trust and the propensity of believing and acting on fake news.

3.6. Moderating effect of brand trust

Brand trust is defined as the confidence that consumers have in the brand, built on the perception that the brand is reliable and takes responsibility for consumers' welfare (Huang, 2017). Brand trust has been found to be responsible for developing a favourable response (Chaudhuri and Holbrook, 2002) and positive purchase intentions towards the brand (Mauri and Minazzi, 2013), which implies that high brand trust is likely to enhance the perception of the benefits of any product, thereby leading to higher purchase intentions. This makes us speculate the existence of a moderation effect of brand trust on the positive association of perceived benefits and purchase intentions towards natural personal care products. Similarly, a lower brand trust may exacerbate the perception of risk that usually originates from negative feedback and is negatively associated with purchase intentions (Bhandari and Rodgers, 2018; Reimer and Benkenstein, 2016). This makes us speculate the existence of a moderation effect of brand trust on the negative association of perceived risks and purchase intentions towards natural personal care products. Furthermore, consumers' purchase intentions are significantly influenced by brand trust (Bhandari and Rodgers, 2018; Huang, 2017) and negative word of mouth (Sparks and Bradley, 2017), which may be circulated via fake news stories. Consumers have also been found to experience a shame-on-me effect and engage in brand avoidance behaviours when they feel disappointed or betrayed by a brand with which they have built a relationship by putting in trust and effort (Tan et al., 2021). For instance, fake news associated with the brand's unethical business practices may result in loyal customers' brand switching behaviour. Based on the preceding discussion, we speculate that consumers with high purchase intentions towards trusted natural personal care product brands are likely to exhibit a higher propensity of believing and acting on fake news. This indicates a moderation effect of brand trust on the association between purchase intentions and the propensity of believing and acting on fake news, which can be hypothesised as:

H9. a-c. Brand trust positively moderates the association of (a) perceived benefits and purchase intentions, (b) perceived risks and purchase intentions, and (c) purchase intentions and the propensity of believing and acting on fake news.

3.7. Control variables

We have examined two demographic variables, i.e., age and gender, as control variables to understand their potential confounding effect on the two dependent variables, purchase intentions and the propensity of believing and acting on fake news. The use of age and gender as control variables is in consonance with prior consumer behaviour studies (e.g., Kaur, Dhir, Talwar and Ghuman, 2021; Kumar, Murphy, Talwar, Kaur and Dhir, 2021b; Talwar et al., 2020).

4. Data and methods

4.1. Questionnaire design

The study used a questionnaire-based cross-sectional survey to collect data to test the proposed hypotheses. The items used to measure the proposed constructs were developed by adapting pre-validated scales, where available. Herein, the measurement items for openness to change are adapted from Claudy et al. (2015) and Wang et al. (2008), perceived benefits and risks from Westaby (2005), purchase intentions from Shaharudin et al. (2010), system trust from Nuttavuthisit and Thøgersen (2017), and brand trust from Chaudhuri and Holbrook (2002). The three items used to measure brand trust are: I trust the natural product brand; I rely on the natural product brand; and products of natural product brands are safe. Since there is no existing measure for the propensity of believing and acting on fake news, we conducted a qualitative study via semi-structured interviews with nine users (five female and four male respondents) and seven non-users (four female and three male respondents) of natural personal care products. The age of respondents varied from 24 years to 50 years. The interview key was structured around the perception of respondents about natural personal care products, understanding of fake news, its prevalence and impact in the context of natural personal care products, tendency to trust such news, situations where efforts were made to authenticate such news, and the change in perception towards these products upon receiving such news. Open codes were generated to analyse the content of the responses manually, and the emerging themes were used to formulate the items to measure the propensity of believing and acting on fake news.

Next, we invited three experts from the area of consumer behaviour with experience in natural personal care products to test the content validity of all of the items used to prepare the initial questionnaire. Their feedback was used to ensure that the items communicated the required meaning clearly and measured the construct as intended. In addition, we conducted a pilot study with ten consumers representing the target user group to test the face validity of the initial questionnaire. After incorporating all of the suggestions related to ambiguous statements and wording, the final survey questionnaire was prepared. The responses were collected on a five-point Likert scale, wherein 1 corresponded to strongly disagree, and 5 corresponded to strongly agree.

4.2. Demographic profile of respondents

The final questionnaire (pen-and-pencil) was distributed to 450 consumers of a leading natural personal care product brand in India. The screening criteria for the respondent recruitment were: (a) existing consumers of natural personal care products for at least six months; (b) believed and acted upon the fake news related to natural personal care products in the recent past and later realised it was misinformation and false campaign. A total of 408 filled responses were received. After removing incomplete responses, 390 were taken forward for analysis. For the sample size estimation, we followed Kline's (2011) suggestion of at least ten responses per item. Since our questionnaire comprised 24 items, a minimum of 240 responses was required; the 390 complete

responses that we collected through the survey were thus more than sufficient. The responses were collected during October 2019 using a mall intercept method in the national capital region of Delhi, India.

The respondents' profile included 42% (n = 164) female and 58% (n = 226) male. The age of respondents ranged from 24 to 75, with a mean age of 32.06 years (SD = 11 years). The family income revealed that about 14% (n = 39) of consumers belonged to the low-income category, 61.28% to the medium-income category, and 25% belonged to the high-income category. Furthermore, 14% (n = 57) of the respondents were undergraduates, 51% (n = 198) were graduates, and 26% were post-graduates or above. Finally, 7% (n = 29) of the respondents belonged to a household with two or fewer members, 16% (n = 65) belonged to a household with three members, 43% (n = 170) of the respondents belonged to a household with four members, and 32% (n = 126) belonged to five or more member households.

4.3. Method of data analysis

Responses collected through the survey method were analysed using SPSS and AMOS as statistical tools to conduct covariance-based structural equation modelling (CB-SEM). CB-SEM is a popular method of data analysis employed by many recent studies (e.g., Dhir et al., 2021; Kaur et al., 2021; Kumar and Yadav, 2021). We first examined the data for its suitability and characteristics. Accordingly, we examined data for normalcy and common method bias. Thereafter, the measurement model was then analysed to establish the reliability and validity of the study measurements using confirmatory factor analysis, and structural paths were evaluated to test the proposed hypotheses. Finally, the mediation and moderation effects were analysed using the PROCESS macro.

5. Results

5.1. Data normalcy and common method bias

After confirming normalcy (skewness and kurtosis between +3 and −3) and the absence of multicollinearity (value less than 3) in the data (Hair et al., 2010), we proceeded to evaluate the data under study for common method bias using Harman's single factor test. The test results show that the considered study items explained 31.04% of the variance when extracted as a single factor. This value is less than the suggested threshold of 50% (Podsakoff et al., 2012). So, the data under the study is free from any potential issues related to common method bias.

5.2. Measurement model

The confirmatory factor analysis (CFA) was conducted to examine the reliability and validity of the study constructs. The internal reliability of the study constructs was ensured since the composite reliability (CR) values of the construct were greater than 0.70 (Fornell and Larcker, 1981). In addition, the factor loadings (Table 2) for all items were above 0.70, which is well above the recommended cut-off value of 0.40 (Hair et al., 2010), thus indicating that all items were good measures of each construct. Next, the convergent validity of the measures was confirmed by the value of the average variance extracted (AVE) as all study constructs exceeded 0.50 (Fornell and Larcker, 1981) (Table 3). The calculated values also confirmed discriminant validity since (a) the maximum shared variance values and average shared variance for study constructs were less than their corresponding AVE values, and (b) the inter-construct correlations were less than the square root of the AVE values. These report that the study also possessed sufficient discriminant validity. Finally, CFA returned a good model fit ($\chi^2/df = 1.79$, $CFI = 0.98$, $TLI = 0.97$, $RMSEA = 0.05$) (Fornell and Larcker, 1981; Hair et al., 2010).

Table 2
Factor loading of measurement items.

Study Measures	Measurement items	CFA	SEM
Openness to Change (OTC) (Claudy et al., 2015; Wang et al., 2008)	I am open to new experiences	.70	.70
	I always want to try something new in the market	.93	.93
	I look for new things all the time	.86	.86
Perceived Benefits (PB) (Westaby, 2005)	Natural personal care products are good for my health	.90	.89
	Natural personal care products are conveniently available	.60	.61
	Natural personal care products contain natural ingredients	.83	.84
Perceived Risks (PR) Westaby (2005)	It is hard to determine the authenticity claim of natural personal care products	.68	.68
	It is difficult to confirm if natural personal care products are chemical-free	.84	.85
	It is difficult to confirm if natural personal care products contain only natural ingredients	.88	.87
Purchase Intentions (PI) (Shaharudin et al., 2010)	I am happy to buy natural personal care products	.89	.87
	I plan to buy natural personal care products	.92	.91
	I would buy natural personal care products	.92	.90
	I intend to purchase natural personal care products within the next ten days	.69	.65
System Trust (ST) (Nuttavuthisit and Thøgersen, 2017)	I believe that the Government's control bodies are qualified to certify natural personal care products sold in India	.82	.81
	I have confidence in the Government's ability to control natural personal care products	.92	.92
	I trust the naturalness claims of natural personal care products since I know that the Government control bodies are in charge	.89	.89
	I believe that the Government does a good job of controlling natural personal care products	.89	.89
The Propensity of Believing and Acting on Fake News (PBAFN)[a]	Fake news about natural personal care products made me withdraw from these products in the past	.65	.64
	Fake news about natural personal care products made me switch from one brand to another in the past	.83	.83
	Fake news about natural personal care products reduced my trust in the concerned brand in the past	.81	.81
	Fake news about natural personal care products motivated me to inform my friends and family and discourage the use of these products in the past	.85	.85

[a] Developed through a qualitative study.

5.3. Structural model

The structural model used for assessing the proposed hypotheses also returned a good model fit ($\chi^2/df = 2.48$, $CFI = 0.94$, $TLI = 0.93$, $RMSEA = 0.06$). The results show that most of the hypotheses were supported (see Table 4). Purchase intentions were associated positively with the propensity of believing and acting on fake news (*H1*: $\beta = 0.25$, $p < 0.001$), as well as with perceived benefits (*H2*: $\beta = 0.66$, $p < 0.001$) and system trust (*H6*: $\beta = 0.33$, $p < 0.001$). In comparison, there was no statistically significant association between perceived risks and purchase intentions (*H3*: $\beta = -0.002$, $p > 0.05$). Similarly, there was no statistically significant association between system trust and the propensity of believing and acting on fake news (*H7*: $\beta = 0.05$, $p > 0.05$). Finally, openness to change was positively associated with both

Table 3
Validity and reliability analysis.

	CR	AVE	MSV	ASV	PBAFN	PB	PR	OTC	PI	ST
PBAFN	.87	.62	.09	.06	**.79**					
PB	.83	.62	.59	.22	.23	**.79**				
PR	.85	.65	.05	.02	.20	-.11	**.81**			
OTC	.87	.70	.12	.07	.28	.27	.23	**.83**		
PI	.92	.74	.59	.24	.30	.77	-.06	.35	**.86**	
ST	.93	.77	.39	.16	.22	.60	-.01	.11	.62	**.88**

Note: Composite reliability = CR, Average variance extracted = AVE, Maximum shared variance = MSV, Average shared variance = ASV, Openness to change = OTC, Perceived benefits = PB, Perceived risks = PR, Purchase intentions = PI, System trust = ST, Propensity of believing and acting on fake news = PBAFN. Diagonal values in bold are square roots of AVE and the off-diagonal values are correlations.

Table 4
Result of hypotheses testing.

Hypothesis	Path	β	p	Support
H1	PI → PBAFN	0.25	<0.001	Yes
H2	PB → PI	0.66	<0.001	Yes
H3	PR → PI	−0.00	>0.05	No
H4	OTC → PB	0.35	<0.001	Yes
H5	OTC → PR	0.18	<0.01	Yes
H6	ST → PI	0.33	<0.001	Yes
H7	ST → PBAFN	0.05	>0.05	No

Note: Openness to change = OTC, Perceived benefits = PB, Perceived risks = PR, Purchase intentions = PI, System trust = ST, Propensity of believing and acting on fake news = PBAFN.

perceived benefits (*H4: $\beta = 0.35$, $p < 0.001$*) and perceived risks (*H5: $\beta = 0.18$, $p < 0.01$*). The tested model explained variance in different dependent variables as follows: 7.6% in perceived benefits, 11.7% in perceived risks, 57.7% in purchase intentions, and 7.5% in the propensity of believing and acting on fake news (see Fig. 2).

5.4. Mediation analysis

Mediation analysis was intended to examine the mediation effect of purchase intentions on the association of system trust and the propensity of believing and acting on fake news. The analysis was conducted using Model 4 in the PROCESS macro. The results revealed that purchase intentions fully mediated the hypothesised association due to the absence of any direct association among system trust and the propensity of believing and acting on fake news, which thereby supported H8 (Tables 5 and 6).

5.5. Moderation analysis

Moderation analysis was conducted in the PROCESS macro to examine the moderation effect of brand trust on the association of perceived benefits and risks with purchase intentions, as well as on the association of purchase intentions with the propensity of believing and acting on fake news. The results show that brand trust positively

Table 5
Results of mediation analysis.

ST → PI→ PBAFN						
	β	*se*	*t*	*p*	*LLCI*	*ULCI*
ST → PI	.63	.04	14.52	.00	.5435	.7137
ST → PBAFN	.08	.05	1.50	.13	-.0234	.1738
PI → PBAFN	.15	.05	3.22	.00	.0593	.2455
Total effect of ST → PBAFN	.17	.04	4.19	.00	.0907	.2514

Note: Purchase intentions = PI, System trust = ST, Propensity of believing and acting on fake news = PBAFN.

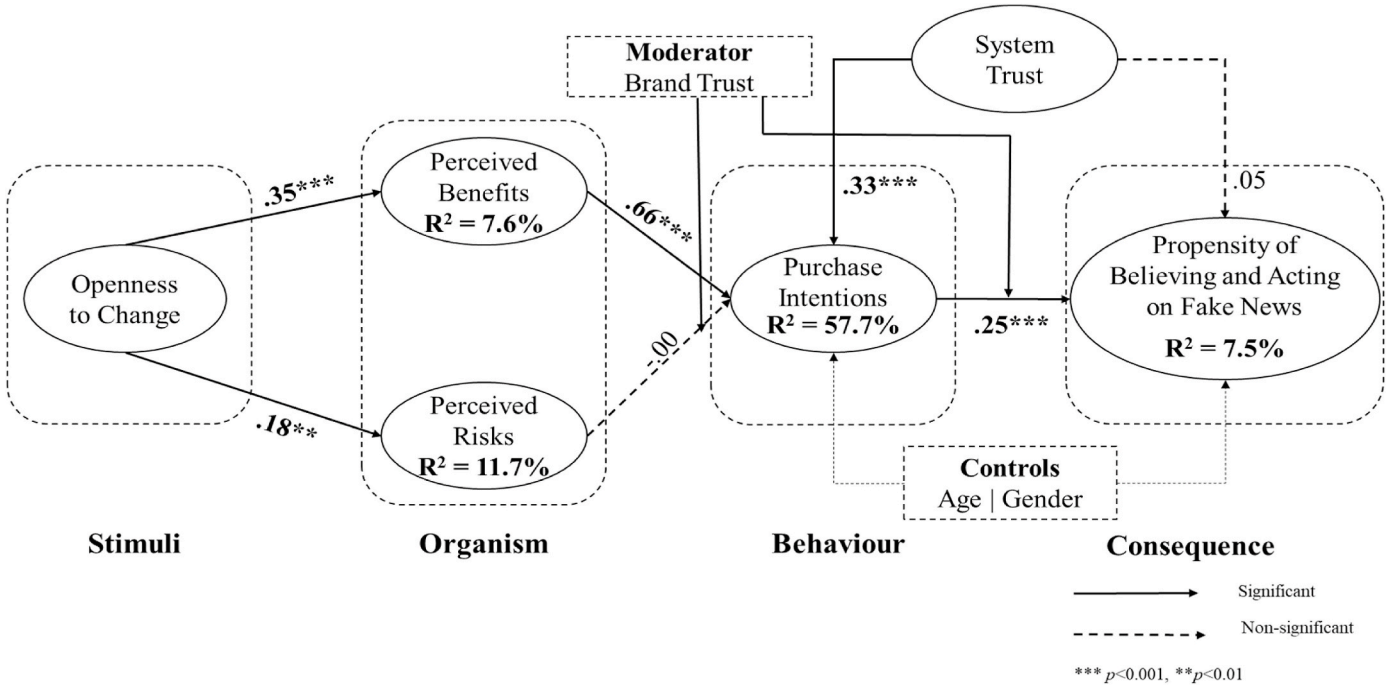

Fig. 2. Result of hypotheses testing.

Table 6
Indirect effects between dependent and independent variable.

	Effect	se	LLCI	ULCI
ST → PI→ PBAFN	.10	.03	.0333	.1604

Note: Purchase intentions = PI, System trust = ST, the propensity of believing and acting on fake news = PBAFN.

moderated the association of (i) perceived risks with purchase intentions (H9b) and (ii) purchase intentions with the propensity of believing and acting on fake news (H9c) (Table 7). In comparison, H9a was not supported. Fig. 3a and Fig. 3b reflect the moderating effect of brand trust.

Fig. 3a shows that consumers with varied intensities of brand trust, i.e., high, medium, and low, reveal similar behaviour in which consumers' intentions to purchase natural personal care products increase slowly with the increase in perceived risk. Fig. 3b indicates that consumers with high brand trust exhibit a sharp increase in the propensity of believing and acting on fake news, which varies with the intensities of purchase intentions towards natural personal care products. It means that due to brand trust, engagement in the propensity of believing and acting on fake news increases with an increase in purchase intentions.

5.6. Control variables

No effect was found for the control variables, i.e., age and gender, on the two dependent variables, namely, purchase intentions and propensity of believing and acting on fake news.

6. Discussion

The findings indicate that purchase intentions are associated with the propensity of believing and acting on fake news (H1). The finding is in line with our anticipation based on the prior extended literature (e.g., Nelson and Taneja, 2018; Visentin et al., 2019). This result implies that consumers who intend to buy and consume natural personal care products in the immediate future will be susceptible to negative news received about any brand selling such products without verifying its authenticity. In turn, these consumers would lose their trust in that brand. Furthermore, upon receiving adverse news, even if fake, such consumers will believe it to be true and not only switch to another brand themselves but also discourage their friends and family from using the products of the concerned brand. In sum, positive purchase intentions will make consumers vulnerable to the negative news they are exposed to, which will cause them to begin disengaging themselves from the brand.

Similarly, purchase intentions are also positively associated with perceived benefits (H2) and system trust (H6). These results are in concordance with prior findings related to the association between benefits and intentions (e.g., Gupta and Arora, 2017) and system trust and intentions (e.g., Gleim et al., 2019; Kumar and Sreen, 2020). The support for H2 confirms the rationality of consumer decisions, whereby they perceive benefits, such as health, easy access/availability, and presence of natural ingredients in natural products, which cause them to have positive intent to buy and consume these products in the immediate future. Similarly, the positive association of intentions with system trust indicates that consumers who have confidence in the ability and effectiveness of the Government to control natural products such that they deliver what they promise, including the claimed naturalness of their ingredients, will have high buying and consumption intentions, upon which they plan to act sooner rather than later.

Table 7
Results of moderation analysis of brand trust.

	β	*t*	*p*	*LLCI*	*ULCI*	Moderation?
PB → PI	.05	1.56	.12	-.0129	.1106	No
PR → PI	.09	2.63	.01	.0214	.1487	Yes
PI →PBAFN	.08	2.39	.02	.0139	.1418	Yes

Note: Perceived risks = PR, Perceived benefits = PB, Purchase intentions = PI, Propensity of Believing and Acting on Fake News = PBAFN.

In comparison to these statistically significant associations that purchase intentions have with most of the antecedents and consequents, the results reveal no association between intent to buy and consume these products in the near future and the risk that may be associated with these products, such as difficulty in verifying the claims of authenticity, being chemical-free, and containing only natural ingredients. The lack of statistical support for H3 is not aligned with our anticipation based on the findings of previous studies (e.g., Claudy et al., 2015; Gupta and Arora, 2017). There could be various potential reasons behind this. The most prominent one that we can put forth is that perhaps natural personal care product brands enjoy the confidence and trust of consumers to the extent that perceived risks do not weigh down their purchase intentions. This argument is also plausible in light of the positive moderating role of brand trust in reducing the negative association between intentions and risks (H9b). However, this finding and the potential reason discussed herein cannot be considered conclusive. Rather, we recommend that it should be verified in the following ways: (a) by collecting data from a diverse and larger sample of participants, and (b) by collecting data from different personal care product brands as a basis to test the same model.

In addition, H7, proposing a positive association of system trust with the propensity of believing and acting on fake news, is not supported by the results. This is not in consonance with our supposition based on the prior extended literature (e.g., Nuttavuthisit and Thøgersen, 2017). It indicates that consumers' perception of system trust in the context of natural personal care products, whereby they feel confident about the Government's ability to control the quality and other aspects of natural products, does not imply that they tend to have similar confidence in the Government's ability to control news circulating in the media. This finding is rather confounding and needs to be examined further, taking into consideration the moderation effect of socio-demographic factors.

Finally, the hypotheses proposing the association of openness to change with perceived benefits (H4) and perceived risks (H5) are supported by the results, as expected based on the accumulated findings (e.g., Hansen et al., 2018; Vieira et al., 2013). These outcomes imply that consumers' readiness to undertake new experiences, their willingness to try something new, and their tendency to be on the lookout for new things affects their evaluation of health and other benefits associated with natural personal care products. Similarly, their openness to new things also gives them a more rational perspective, due to which they also consider the potential risks associated with these products, such as a lack of authenticity in claims and contents.

The findings also confirm the moderating effect of brand trust between perceived risks and purchase intentions (H9b), in tandem with our proposition based on prior studies (e.g., Bhandari and Rodgers, 2018; Reimer and Benkenstein, 2016). This indicates that consumers are likely to buy the natural personal care products of brands they trust despite acknowledging the risks associated with their products. The moderation analysis shows that with the increase in the perceived risks, the purchase intentions increase for a high level of brand trust. However, with an increase in perceived risks, purchase intentions decrease or remain the same for medium and low brand trust, respectively. Similarly, H9c, proposing a positive moderating effect of brand trust on the association of intentions with the propensity of believing and acting on fake news, is supported. It means that due to brand trust, engagement in the propensity of believing and acting on fake news increases alongside purchase intentions.

In comparison, brand trust does not moderate the association of perceived benefits with intentions (H9a). A possible reason for the same could be that the benefits are factored in the formation of trust and translate fully into purchase intentions, such that trust does not have any further interaction effect.

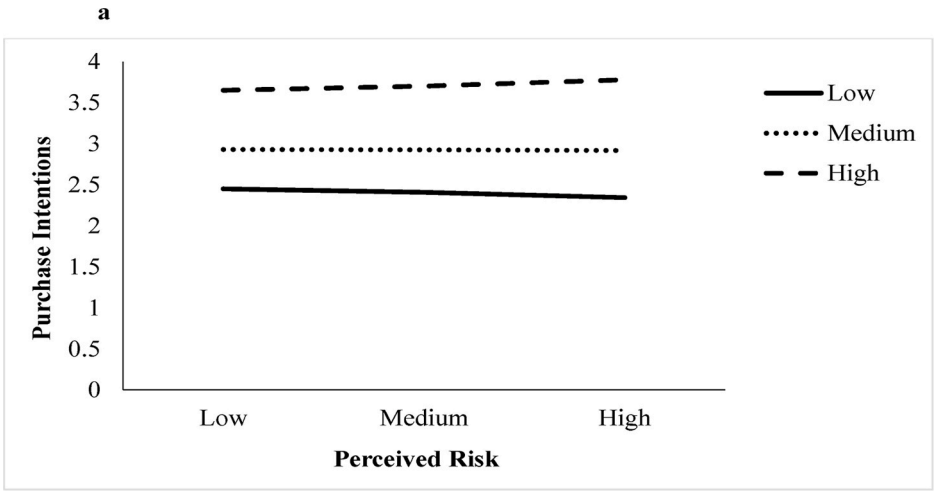

Fig. 3a. The moderating influence of brand trust.

Fig. 3b. The moderating influence of brand trust.

Lastly, the study also confirmed the full mediation effect of purchase intentions on the association between system trust and the propensity of believing and acting on fake news. This finding indicates that consumers' trust in the system increases their propensity of believing and acting on fake news only indirectly through purchase intentions. Thus, system trust increases intentions, which, in turn, increases the propensity of believing and acting on fake news related to natural personal care products.

7. Conclusion

Our study investigated the antecedents of purchase intentions and the propensity of believing and acting on fake news in the context of natural personal care products. We utilised Stimulus Organism Behaviour Consequence (SOBC) as a theoretical framework since it helped theorise how the stimulus is associated with the internal processes of consumers, which are then reflected in behavioural intentions towards the purchase of natural personal care products, and through them leads to the consequence of believing fake news to be true and acting on it. Specifically, the study addressed three research questions by collecting and analysing data from 390 consumers of natural personal care products. The statistical analyses undertaken to respond to RQ1 revealed that purchase intentions were positively associated with consumers' system trust as well as their propensity of believing and acting on fake news. In addition, although system trust had no statistically significant association with the propensity of believing and acting on fake news, it acted through the intervening mechanism of full mediation by purchase intentions. Similarly, the analysis undertaken to respond to RQ2 revealed a positive association of openness to change with both perceived benefits and perceived risks of using natural personal care products. However, only perceived benefits were found to be positively associated with purchase intentions. Finally, the moderation analysis conducted to examine the moderation effect of brand trust revealed that it moderated the association of perceived risk with intentions, as well as the association of intentions with the propensity of believing and acting on fake news. Finally, age and gender had no confounding effect on the dependent variables. The study thus offers multiple contributions to theory and practice in the area, as discussed below.

7.1. Theoretical implications

The study makes four key contributions to theoretical advancement in the area. First, the study extends SOBC to theorise the behaviour of consumers of natural personal care products, thereby becoming the first study to extend this framework to the context of personal care products. It thus enriches the theoretical insights available to explain the complex decision-making process that underlies the response of consumers to natural products. Notably, the SOBC framework is less understood in an entire retail setting since very few studies have been used to explain consumer behaviour in this context (e.g., Bigne et al., 2020; Talwar

et al., 2021). Thus, the study contributes to theoretical advancement in the area.

Second, the study contributes to advancing the theoretical usefulness of SOBC in explaining retail consumer behaviour by providing empirical evidence supporting its applicability. The study not only identifies variables, such as openness to change, with the SOBC framework but extends the theory by proposing an additional stimulus, i.e., system trust, which is associated with behaviour and consequence. By doing so, the study puts forth the idea of a stimulus driving not only the internal state of consumers but also their behaviour and its consequence. In addition, the study extends the scope of SOBC by including moderating and mediating influences. As a result, the study lays the basis for the theoretical deepening of SOBC, making it more responsive to the rising complexity in behavioural tendencies of consumers in retail settings.

Third, the study utilises openness to change as a stimulus associated with the perceived risks and benefits of using natural personal care products, which, in turn, are associated with purchase intentions and the propensity of believing and acting on fake news. Although prior studies (e.g., Claudy et al., 2015; Hansen et al., 2018; Harmel and Yeh, 2019) have suggested that openness to change may lead to a behavioural response, the extant literature offers a limited understanding of how openness to change shapes the scholarly understanding of perceived benefits and risks and how these get reflected in purchase intentions. Thus, the study enriches the literature of natural personal care products and enhances the scope of empirical work for personal care products (e.g., Manová et al., 2013). Furthermore, the study considers the role of specific variables, such as brand trust and system trust, in influencing consumers' decisions. Thus, the study makes a remarkable theoretical contribution by proposing newer associations in hitherto unexplored contexts.

Lastly, the study proposed and examined a new construct, the propensity of believing and acting on fake news, in the context of natural personal care products. Although fake news has influenced several aspects of society, such as politics and social media (e.g., Talwar et al., 2019, 2020; Papanastasiou, 2020; Visentin et al., 2019), it has remained under-explored in the retail context, especially in the case of natural personal care products. With the rising anecdotal observations of how fake news is unfolding in the retail space and the limited empirical evidence of how damaging it can be for brands and firm reputation (Chen and Cheng, 2019), the present study's efforts to understand consumers' perception of such news in a retail space initiates a very relevant and timely debate.

7.2. Managerial implications

The study provides four key inferences for manufacturers of natural personal care products, managers, and public policymakers. First, by revealing that existing consumers' purchase intentions are enhanced by the products' perceived benefits and that the effect of perceived risk is moderated by brand trust, the study indicates to manufacturers that consumers would be less forgiving of any lapses in the naturalness of ingredients or a breakdown in regular supply. Therefore, these are the two key areas they should strategically focus on. In addition, manufacturers should prominently highlight the various benefits of natural personal care products to attract the attention of consumers. For instance, the health benefits can also be communicated by placing the image of a doctor product label. For marketing managers and advertising companies, it implies that in the case of natural personal products building brand trust can yield rich dividends. Therefore, they should tailor their promotion and communication plans to build a brand image that resonates positively with consumers.

Second, since our findings suggest that consumers' openness to change is associated with their product evaluation in the form of perceived risks and benefits, manufacturers should label their products and plan a sales pitch that appeals to the consumers' sense of newness and attracts them by offering novel experiences. Thus, offering trials and testing sessions may work very well in this space.

Third, since the study highlights that being loyal to a brand and having high purchase intentions makes consumers susceptible to believing everything about the brand/natural personal care products, including thinking even fake negative news to be true and acting on it in terms of dissociating from the brand, brands/firms in the natural personal care products industry should have a sound public relations and media department that actively releases positive news about these products, and immediately combats/refutes any fake news as soon as it surfaces.

Lastly, since our findings reveal that system trust increases the purchase intentions towards natural personal care products, we recommend that governments should work in close collaboration with manufacturers to set quality standards and certifications for these products. The Government can make a specific department that is charged with the responsibility of monitoring the manufacturers to prevent malpractices while, at the same, providing consumers with a forum for seeking redressal for their product quality-related grievances.

7.3. Limitations and future research

The study has presented novel findings on natural personal care products and fake news, yet it still has some limitations. First, the study is based on the findings from Indian consumers of natural personal care products, suggesting that the findings of this study may not be directly applicable to other cultural contexts or developed countries. Future studies may incorporate this limitation by extending the study to multiple cultural contexts or developed countries. In addition, a comparative study between developing and developed countries is likely to shed newer insights.

Second, although there could be multiple stimuli for consumers of natural personal care products, the study has only considered one. Thus, future studies may incorporate other stimuli, such as price, willingness to pay, promotional offers, or government regulation, to use natural products, which are likely to offer deeper insights into this context.

Third, the data was collected from a company known for its natural product offerings; thus, generalising the findings to the overall natural products category or other categories, such as apparel, may be difficult. Future studies may incorporate this limitation by exploring other product categories and doing a comparative study. Future studies may also adopt a qualitative approach or some other theoretical framework, such as behaviourial reasoning theory or the theory of consumption values, to get greater insights into the motivation of consumers to use natural personal care products.

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