German and South African millennials' reactions to fear and stress when purchasing products during COVID-19

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ABSTRACT

COVID-19 was a sudden and unexpected pandemic that upset the very foundations of human existence world-wide. Both Germany and South Africa felt devastating impacts during COVID-19 in the business sector. The effects of COVID-19 on millennials' behaviour patterns is of importance. This paper will shed more light on the impact of fear and stress during COVID-19 on millennials' purchases of certain products. The study employed an online survey. The sample included millennials who had internet access, born during 1980-2002 from SA and Germany. Non-probability convenience sampling was employed in the study. Germany had 949 and South Africa, 676 respondents. Thus, totalling a convenience quota sample of 1625. Corona specific personality traits registered different results. The study results revealed that the fear dimension was much higher in South Africa than in Germany. Fear also had a high influence on the buying behaviour of different products groups like groceries, toiletries, personnel protective equipment and alcohol– with high differences registering between Germany and South Africa during the different COVID 19 specific restrictions.

Keywords: Consumer behaviour, COVID-19, Food, Millennials, PPEs

INTRODUCTION

COVID-19 is one of the greatest humanitarian pandemics registered under disaster management by many countries in the world. COVID-19 has caused customers to display fear, stress, anxiety and mass panic. There has been mass buying of food, medical supplies, toilet paper, hand gloves, hand sanitisers and face masks worldwide. To manage COVID-19, many governments worldwide were forced to take a variety of drastic measures. Due to COVID-19, and the rising rate of infection in South Africa (SA), the government declared a National State of Disaster on the 15 March 2020 and lockdown came into effect on the 23 March 2020. During this time, many stores and businesses in South Africa shut down. People stayed at home, and only essential workers were allowed to work. Germany did not have a strict lockdown like South Africa. There was, for example, no general curfew (Robert Koch Institute. 2020:1-10). The rationale and justification for the researchers choosing these two countries is that Germany is a developed country and South Africa an emerging nation. The contrast in their economies creates different implications for purchasing behaviour. The study will shed light on the millennial segment, where there is limited information in the literature. It will further investigate the impact of stress and fear and how it influences German and SA consumer behaviour during the pandemic.

Objective and purpose of the study

Personality traits are essential factors used to unpack why millennials purchase a product during COVID-19. An emotion like fear or stress is a strong personality trait that has a bearing on the purchasing patterns and behaviour of millennials during COVID-19. Therefore, the main objective of the study is to analyse the impact of fear and stress during COVID-19 on millennials in Germany and South Africa and report on how this influences their purchases of consumer/household products such as PPEs, toiletries, groceries and alcoholic beverages.

Millennials in SA and Germany occupy a large market segment involved in the purchasing of products and services, and the purpose of this study is to provide companies with information on how to market products to millennials during a pandemic.

LITERATURE REVIEW AND DEVELOPING HYPOTHESES

The literature review will shed more light on important themes. These themes assist in the development of the hypotheses.

Millennial Customer

The study is focused on the millennial customer, and it is essential to provide some facts on this market segment. Millennials or Generation Y or Eco boomers, as they are known, make up a dynamic and exciting group of the world population that is involved in consuming various products and services. Since they make up such a large group of the world community, marketers see great value in conducting studies on the millennial market segment and their buying behaviour. By understanding this segment, marketers can launch marketing strategies that can capture this segment's attention and further enhance its spending potential in the market. Unpacking the characteristics of this group makes millennials easier to understand.

Moreno, Lafuente, Carreón & Moreno (2017:137) state that :"The term millennium is used throughout the world; however, birth dates cause a lot of debate worldwide since there are a variety of differences in the period when this generation is statistically analyzed.". DeChane (2014: 1-2) indicates that the millennial generation is a grouping of people born roughly between 1980 and 2000. According to Raphelson (2014:1-2), Neil Howe, the historian, coined the term "millennial" to describe the generation born between 1981 and 2003.Taking this into account, the authors chose their millennial sample from those born between 1980-2002 for the study.

Ferguson (2012:1-2) posits that millennials make up a vast number of individuals linked together through the globalised world networks. Due to the vastness of the generation, businesses and marketers focusing on millennials have become a necessity and a priority as opposed to an optional decision. The estimated size of the overall global millennial generational cohort is around 1.7 billion people. According to Holmes (2015: 1), the largest population of millennials are in India and China. BIZCOMMUNITY (2018:1) indicates that South Africa alone has over 14 million millennials, which makes up approximately 27% of the population. According to Stokes (2015:1-2), Germany has approximately 14.68 million millennials, amounting to about 18% of their population.

Henseler (2012: 23) argues that millennials are a generation in search of human dignity, and that they value their freedom. Gerzema & D'Antonio (2011:1) indicate that millennials are a set of pioneers who have been changing their spending behaviour. They had aligned with companies that they can identify with in terms of their values and beliefs. Lee and Kotler (2016:185-192) argue that millennials often use and adapt technology in their daily lives. They have a set of values, life experiences, motivations, and common buying behaviours. Furlow (2012: 62) believes that the members of this generation are trustworthy, tolerant, individualistic, and academically prepared and have expertise in technological use that distinguishes them significantly from the generations that preceded them.

The next vital theme to discuss is emotions and personality traits and their impact on consumer behaviour.

Millennials emotions and personality traits during COVID-19 and its impact on their purchases

The unknown virus was first detected in December 2019 and subsequently identified as the 2019 novel coronavirus (COVID-19), based on the symptoms and laboratory test results (Huang, Wang, Y, Li, Ren, Zhao, Hu, Zhang, Fan, Xu, Gu & Cheng, 2020: 497-498). COVID-19 was a sudden and unexpected pandemic never before experienced by humankind at this magnitude. How millennials are making purchasing decisions about products during COVID-19 is a critical consideration for marketers. In this study, the researchers analyse how fear and stress during the COVID-19 pandemic drove millennials in Germany and South Africa towards making certain product purchases. Tsao & Chang (2020: 1801) argue that personality traits and psychological states influence the formation of a consumer's purchase motivation. Therefore, personality traits can, to some degree, explain a person's behaviour and hence, their consumption behaviour and the purchasing decisions taken. During COVID-19, there was a shift in buying behaviour stimulated by fear and uncertainty. The pandemic gave rise to some overwhelming emotions and attitudes that encouraged millennials towards extreme buying of certain products. According to Meierhans (2020:1), Australia like many other countries in the world experienced panic buying and stockpiling of PPEs, food items and general household supplies, despite there being no indication of an impending shortage.

Hawkins and Mothersbaugh (2010: 362-397) indicate that the internal influences that affect consumer behaviour consist of an individual's perception, learning, memory, motives, personality, emotions and attitudes. South Africa had a very harsh lockdown, and many products were not allowed to be sold during certain stages of the lockdown. Just before lockdown, retail outlets experienced mass buying behaviour in preparation for the lockdown in SA. Only essential goods and services were sold at the beginning of lockdown in SA. Essential goods and services included shops and retail outlets that catered for food and groceries, medical practices or any business selling medical products, hospitals, police, army, navy, ATMs and certain banks, petrol stations and transport services. Restaurants, pubs, hotels and tourism agencies were closed. In lockdown, stage four and five, there was a ban on alcohol and cigarette sales. Clothing stores were also closed during the first few weeks of lockdown. South Africa had one of the harshest lockdowns in the world. In Germany, all goods were available. The infection rate in Germany was low compared to South Africa. Since SA was rated at number 5 in the world with one of the highest infection rates, the drastic lockdown in SA was implemented by the government to curb the spread of COVID-19. Due to the high infection rates and the strict lockdown, the SA millennial customer might have experienced higher levels of fear, anxiety and stress. These personality traits and emotions could have influenced their purchases of certain products. Loxton, Truskett, Scarf, Sindone, Baldry & Zhao (2020:2) argue that uncertainty and fear during COVID-19 moved to alter consumption patterns.

Consumer decision making was further exacerbated by periods of government-enforced self-isolation for returning travellers or individuals who they believed might have been exposed to the virus, as well as broader city- or country-wide periods of social distancing where people were largely restricted to their homes.

Based on the above discussion, we constructed Hypothesis 1:

H1: There is a statistically significant difference between the COVID-19 specific personality traits in South Africa and Germany.

Fear of the unknown is reflected in panic buying behaviours as consumers channel their lack of knowledge about crises into actions that are perceived as comforting, providing security or that alleviate stress (Elmore 2017:405). Maslow's hierarchy of needs (1943) also indicates that people have a basic survivalist need. Loxton et al. (2020: 5) in their study argue that in applying Maslow's Hierarchy of Needs (1943), they analyse the satisfaction or utility behind particular wants and needs, and hence the ways that consumers are motivated to prioritise spending. Customers prioritised discretionary rather than non-discretionary expenditures. Colloquially, Maslow's theory might classify purchases as "needs" versus "wants." Food, clothing, shelter, and then safety are factors that propel customers, especially during a pandemic to indulge in mass buying. Yoon, Narasimhan & Kim (2018:3615-3616) suggest that spending at retail outlets increased significantly in preparation for an impending disaster to prepare for the unknown.

Since coronavirus pandemic is similar to a natural disaster, Larson & Shin (2018:295) state that: "In times of natural disaster, buying frenzies in preparation for the upcoming event are to be expected." Elmore (2017:404) indicate that a week before the hurricane Irma's landfall hit the state of Florida, compared to the same period a year earlier, spending at gas stations rose and were recorded as high as 63.2%, at grocery stores 41%. Overall retail spending rose 20% in six of the major metro areas across the Florida region. This phenomenon is understandable as the human race has a strong will to survive which drives them to prepare for times of hardship. According to BBC News Australia (2020:1), customers have been involved in panic buying, stockpiling and mass buying. Measures had to be quickly implemented by local stores to manage this type of buying behaviour. They included free delivery of food products to customers to avoid panic-buying. Stores placed restrictions on the number of customers allowed in the store at any given time to avoid overcrowding, restrictions were also imposed on the number of items that customers could purchase due to their possible scarcity. Stores also expanded on the number of suppliers they previously did business with, to avoid food shortages. Yoon, Narasimhan & Kim (2018:3615) state that: "Upon detecting any event that can lead to upstream disruptions, consumers often stockpile supplies to mitigate the risk of future shortages. When rice production in Australia was reduced by 98% after a long drought period in 2008, for instance, consumers in Vietnam, India and Hong Kong began to stockpile rice due to the fear of insufficient future supply, which actually made the shortage problem worse. After the radioactive leak at Japan's Fukushima nuclear plant in 2011, for instance, consumers went on panic buying of various products such as iodine tablets (in Bulgaria), salt (in China), red wine and seaweed (in Russia) that were rumoured to prevent radiation poisoning."

From the literature discussion, mass buying and stockpiling behaviour by consumers has taken place in anticipation of their fear and stress surrounding COVID-19. Loxton, Truskett, Scarf, Sindone, Baldry & Zhao (2020:2) add that the restrictions imposed by governments influenced and changed customers' purchases of products. As the fear of infection increased globally, consumer behaviour changed and affected the timing, breadth and volume of purchases.

Based on the above discussion, we constructed Hypotheses 2 and 3:

H2: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on the purchasing of food and groceries during COVID-19.

H3: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on toiletry purchasing during COVID-19.

Wen, Sun, Li, He & Tsai (2019: 9) posit that during a health crisis, people form risk perception about the situation and react accordingly. Yuen, Wang, Ma & Li (2020:10) add that the degree of risk perceived by a customer can determine his or her assessment of the threat of an outbreak, which can be measured by both the susceptibility and severity of the event. Both susceptibility and severity are sub-dimensions of the health belief model, which posits that customers are motivated to undertake self-protection behaviour to minimise risk. According to Aliperti and Cruz (2019:16), hoarding behaviour prior to or during a disaster is perceived as a form of self-protection behaviour taken by the consumer in an attempt to minimise risk. Mehta, Saxena, & Purohit (2020: 293) believe that the most critical factors which model the consumer's behaviour in a crisis are risk attitude and risk perception. Risk attitude reflects the consumer's interpretations concerning the risk content and how much he or she dislikes the content of that risk. Risk perception demonstrates the interpretation of the consumer towards the chance of being exposed to the risk content. Loxton, Truskett, Scarf, Sindone, Baldry & Zhao (2020:2) add that the COVID-19 crisis may increase consumer fear but also the broader repercussions of this fear and uncertainty reflected in new spending decisions. This consumer spending could explain somewhat the need for mass purchases of PPEs worldwide. PPEs like masks were seen as essential products when appropriately used, served as preventing the spread of the virus.

Based on the above discussion, we constructed Hypothesis 4:

H4: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on PEE purchases made during COVID-19 pandemic.

The media has been reporting daily on COVID-19, and as infection rates increased worldwide, this has stimulated or driven- down certain shopping patterns as people's priorities have changed in keeping with this global crisis. In SA, there was a ban on alcohol lasting many months during the lockdown, and in Germany, alcohol was freely available. The researchers believe that COVID-19 and the emotions (stress, fear and anxiety) that people have been feeling surrounding the pandemic had stimulated certain buying behaviour. The pandemic brought with it high levels of stress, and some people needed alcohol to serve as a buffer during this time. Tannenbaum, Hepler, Zimmerman, Saul, Jacobs, Wilson & Albarracin (2015: 1178) posit that fear and stress appeal affects the purchase behaviour of certain goods. Loxton, Truskett, Scarf, Sindone, Baldry & Zhao (2020:2-7) add that the COVID-19 has had a critical impact on consumer behaviours globally, as a rise in restrictions placed by governments and continued uncertainty about the pandemic had led to irregular and irrational consumer activity.

Based on the above discussion, we constructed Hypothesis 5:

H5: There is a statistically significant influence of fear and stress on the purchase of alcoholic beverages during the different stages of the lockdown.

RESEARCH METHODOLOGY

There are three types of research design: qualitative, quantitative and mixed methods (Creswell & Creswell, 2018:47). This research is a quantitative study. A cross-sectional survey research strategy was adopted in Germany and South Africa.

Data Collection Instrument and Data Collection

The data were collected using a 7-point Likert-like scale questionnaire, that asked questions of millennial respondents in both countries, on their perceptions towards buying behaviour and consumption of particular products during COVID-19. Bougie and Sekaran (2019:204) comment that the Likert scale technique is used to assess how respondents agree or disagree with a given statement. Hair, Celsi, Ortinau & Bush (2008:155) argue that closed-ended questions are used for easy collection and analysis of data.

In South Africa and Germany, computer- assisted questioning was done via an online survey. In South Africa, an online panel access provider was used to collect data from the panel respondents. The data collection took place between 5-25 August 2020. In Germany, the respondents were recruited via social and personal networks between 30 July 2020 to 21 August 2020, and the online survey conducted using the online tool Unipark.

Target population

The target population are millennials born during 1980-2002 who had internet access and who lived in South Africa or Germany. In South Africa, the target population additionally focusses on LSM groups 7 to 10. Some of the analysed product categories are expensive, and the upper- income consumers buy them. Therefore, it was decided to select the South African Living Standards Measure (LSM) categories of 7 to 10 (predominantly urbanised and wealthier) as the target population (Chronison, 2012). Dobbelstein, Mason & Kamwendo (2020:70) add that the selection of 7-10 LSM groups is supported by the fact that South Africa's Gini coefficient is (63.0) and in German (31.7). These statistics provided by World Bank Group (2019) are indicative of Germany having a much wider spread of wealth through the country. In SA, a relatively small proportion of the population are able to afford products with higher- priced product categories, whereas in Germany, income levels are generally higher; therefore, most of the German population can afford slightly higher price product categories.

Sampling method and structure, reliability and limitations

Non-probability sampling method, namely judgement quota sampling method, is employed in selecting a sample of respondents from Germany and South Africa. In South Africa, the LSM group influences the buying behaviour quotas for the LSM groups that were set. To make sure that the sample is a good representation of the population, these LSM groups were included. In addition, quotas were set for gender and four different age groups.

In Germany, additional quotas for age, gender and income are set within the selected target group. This is based on the fact, that these criteria have an influence on the shopping behaviour, and to assure that the sample represents the selected target population for Germany (Mason, Dobbelstein & Corbishley, 2019:67).

A total sample of 2118 respondents in Germany and South Africa is included in the survey. A comprehensive quality check of the answers was done based on the following criteria:

•   Age and completeness of the survey
•   Available LSM information
•   Plausibility check regarding the fitting of the answers to 3 different questions.

Based on the above, 493 questionnaires were removed from the sample. Finally, 949 quality checked, valid answered questionnaires remained for Germany and 676 for South Africa. Because of the different ways of data collection, the number of participants was easier to control in South Africa than in Germany. The quality of answers provided through a panel provider is usually higher compared to those from freely recruited participants. Therefore, the over-recruitment in Germany was higher. In this specific instance, the answer quality of the voluntarily recruited participants was high, resulting in fewer cases than expected that had to be removed in Germany because of quality control. Therefore, the sample size in Germany is more extensive than in South Africa. The researchers decided not to eliminate the exceeding questionnaires. Overall, the sample reflects the target population in both countries very well.

As Table 1 shows, in South Africa, all given quotas were excellently achieved. In Germany the highest income class (3.000€ + net household income) and the youngest age class (born 1996 – 2002) are over- represented.

TABLE 1
DEMOGRAPHIC PROFILE OF SAMPLE

Criterion	South Africa (n = 676)		Germany (n = 949)	
	Planned	Actual	Planned	Actual
LSM 7	36,0%	34,9%	not applicable	
LSM 8	23,0%	22,6%	not applicable	
LSM 9	25,0%	25,6%	not applicable	
LSM 10	16,0%	16,9%	not applicable	
Male	49,6%	51,0%	51,6%	47,7%
Female	50,4%	48,8%	48,4%	51,7%
Income* <1.000€	not applicable		31,0%	24,9%
Income* 1.000€ - <2.000€	not applicable		38,0%	30,0%
Income* 2.000€ - <3.000€	not applicable		22,0%	26,0%
Income* 3.000 and more	not applicable		9,0%	19,1%
Born 1980 - 1985	19,0%	17,8%	27,0%	19,8%
Born 1986 - 1990	25,0%	25,0%	24,0%	17,5%
Born 1991 - 1995	25,0%	27,1%	22,0%	20,7%
Born 1996 - 2002	31,0%	30,2%	27,0%	42,0%

*Income: monthly household nett

TABLE 2
RELIABILITY – CRONBACH'S ALPHA

Dimension	Cronbach's Alpha
Covid-19 specific fear	0,742
Covid-19 specific utilitarianism	0,700
Covid-19 specific stress	0,804

The Cronbach's alpha was an excellent instrument used to test reliability in the study, since, it was appropriate for the type of data collected, i.e. to evaluate dimensions or constructs based on more than 1 item. Table 2 indicates the values of Cronbach's Alpha scores in the study.

The dimensions are reliable since the values are above 0.6.

There was one major limitation of the study. The results could not be generalised to the world millennial market segment as the research was conducted on millennials in Germany and SA only. However, the researchers believe that since this is a large market segment that has a very high spending power in the global economy, the research gathered on this study makes it justifiable and highly relevant.

RESULTS

In the discussion that follows the results in the empirical study will be outlined and discussed in detail.

Descriptive statistics

Table 3 shows the mean values for South Africa, Germany and in total for the analysed questions.

The two statements with the highest agreement show a high tentativeness regarding shopping during COVID 19. Based on the higher cases of COVID-19 in South Africa compared to Germany, the findings are not surprising that the respondent's agreement to "I only go to the stores if I really need something" is much higher in South Africa (.6.19) than in Germany (4.64).

TABLE 3
MEAN VALUES OF QUESTION RESPONSES

Country	Germany	South Africa	Total
During COVID-19 I only go to the stores if I really need something.	4,64	6,19	5,28
With COVID-19, shopping in stores is no long fun and entertaining.	4,11	5,34	4,62
I also enjoy my shopping in the stores with COVID-19.	4,59	4,55	4,57
I'm afraid of accidentally infecting someone with COVID-19.	4,16	5,10	4,55
I'm afraid of contracting COVID-19 and getting ill.	3,52	5,90	4,50
I feel stressed by wearing a face mask.	4,09	4,18	4,13
Because COVID-19 limits shopping with friends, I enjoy shopping less.	3,81	4,43	4,07
I feel stressed about all the COVID-19 rules and regulations that apply when entering a store.	3,67	4,33	3,94
I almost never go to the store due to COVID-19 and only shop online when I need something.	3,16	3,88	3,46
I have a lower income because of COVID-19.	2,43	4,88	3,44
Because of COVID-19 I have got less time to shop in stores.	2,11	4,98	3,30
COVID-19 makes it more difficult for me to reach stores.	2,37	4,52	3,26
I feel uncomfortable because in COVID-19 times there are less people in the stores.	2,12	3,28	2,60

Scale: 1 = totally disagree - 7 = totally agree

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TABLE 4
PERCEIVED BUYING BEHAVIOUR PRE, DURING AND POST LOCK DOWN

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	Pre lockdown		During lockdown		Post lockdown	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Food & Groceries	4,78	1,428	4,67	1,513	4,24	1,237
Alcoholic Beverages	3,50	1,781	3,11	1,817	3,35	1,619
Clothing	3,14	1,484	2,77	1,591	3,64	1,502
Leisure Goods, e.g. sports articles, hobbies, board games	3,40	1,669	3,08	1,740	3,29	1,468
Toiletry, e.g. toilet paper, soap	4,72	1,375	4,56	1,489	4,27	1,244
DIY & home improvement goods	3,72	1,583	3,34	1,733	3,50	1,468
PPE's & medical supplies	4,66	1,576	4,66	1,621	4,20	1,486

Scale: 1 = much less – 7 = much more

Table 4 includes the perceived buying behaviour pre, during and post lockdown.

In Germany, all products were available, even during the lockdown. There was no ban on any product categories like alcohol or cigarettes. In Germany, alcohol and cigarettes were also available in any grocery store. During lockdown, shops for non-essential products like clothing were closed. These products, however, were always available online, which is one reason why the authors selected only people with internet access as the target population.

During the lockdown in SA, a ban on specific products like alcohol and cigarettes was imposed. The table indicates the mean values for both countries. For Germany, the mean scores for buying alcoholic beverages during lockdown is 3,82, indicative of a slight reduction. For South Africa, it is 2,10, which indicates a high reduction. Out of the 671 South African respondents' who answered that question, 417 said "much less (1)". Fifty-seven choose the middle category, these might be people who have not bought alcohol before. 7.5% answered that they bought more alcohol during the lockdown. These questionnaires were double plausibility checked. One explanation for the results might be that respondents in SA bought alcohol illegally.

Formatting Relevant Dimensions

Thirteen statements were used to measure Corona specific personality traits. An exploratory factor analysis was conducted to identify dimensions of personality traits. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0,845. Bartlett's Test of Sphericity shows an Approx. Chi-Square of 4440,65 which is highly significant ($p < 0,001$). Finally, eleven items were used to create three different dimensions. Table 5 indicates the varimax rotated component matrix based on Principal Component Analysis using Kaiser Normalization as Rotation Method. Three dimensions, named "Corona specific fear", "Corona specific utilitarianism" and "Corona specific stress" can be clearly identified.

Table 5 indicates that the stress dimension is only measured by two items. Originally time stress was reflected in the item "Because of COVID-19 I have got less time to shop in stores." This was intended to be include in this dimension, but it showed much higher loadings for the dimension "fear". Since Cronbach's Alpha (0.804) and the factor loadings (0.836 / 0,777) are very high, face and expert validity confirmed the measurement of the dimension with only two items as being acceptable.

Hypothesis 1: There is a statistically significant difference between the COVID- 19 specific personality traits in South Africa and Germany.

The hypothesis is accepted ($p < 0,01$).

TABLE 5
EXPLORATORY FACTOR ANALYSIS OF COVID-19 SPECIFIC PERSONALITY TRAITS

Rotated Component Matrix[a]

Covid-19 specific personality traits	Component - Cov. 19 spec dim		
	1: fear	2: utilitarianism	3: stress
I'm afraid of contacting COVID-19 and getting ill. (corona_fear_1)	,645	,352	-,196
I have a lower income because of COVID-19. (corona_fear_3)	,742	-,014	,084
I feel stressed by wearing a face mask. (corona_stress_1)	,000	,075	,836
I feel stressed about all the COVID-19 rules and regulations that apply when entering a store. (corona_stress_2)	,187	,214	,777
Because of COVID-19 I have got less time to shop in stores. (corona_stress_3)	,753	,245	,147
COVID-19 makes it more difficult for me to reach stores. (corona_utilitarian_1)	,705	,236	,277
During COVID-19 I only go to the stores if I really need something. (corona_utilitarian_2)	,339	,699	-,149
I almost never go to the store due to COVID-19 and only shop online when I need something. (corona_utilitarian_3)	,259	,463	,209
I also enjoy my shopping in the stores with COVID-19. (corona_hedonic_1_inverted for ANALYSIS)	,028	,760	,139
Because COVID-19 limits shopping with friends, I enjoy shopping less (corona_hedonic_3)	,109	,433	,369
With COVID-19, shopping in stores is no long fun and entertaining (corona_hedonic_4)	,184	,681	,351

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Figure 1 provides an overview of the values for the dimensions for both countries (Germany and South Africa). As the single items, the dimensions are measured on a scale 1 = very low to 7 very high. It can be seen that all dimensions show a higher value for South Africa than for Germany. COVID-19 specific fear dimensions in South Africa are (5,07) is nearly twice as high as compared to Germany (2,61). The utilitarian dimension shows a highly significant difference of (0.99), with (5.05) for South Africa and (4.06) for Germany. The lowest but still highly significant difference can be seen for Corona specific stress which is (4.26) in South Africa and (3.88) in Germany.

FIGURE 1
COUNTRY DIFFERENCES REGARDING DIMENSIONS
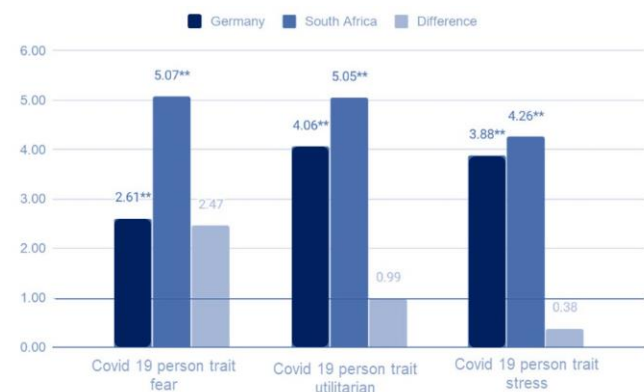
** All values are highly significant (0,00% to 0,01%), n=666-669 (Ger), n=946-949 (ZA)

The influences of these COVID 19 specific personality traits on the shopping behaviour are analysed using univariate regression analysis. The three dimensions are separately used as independent variables. The dependent variables are the buying behaviour for groceries, alcoholic beverages, clothing, leisure goods, toiletry, DIY and PPEs. The regression analyses are done for the total sample as well as separately for both South Africa and Germany. Table 6 shows the results for the total sample, Table 7 for South Africa and Table 8 for Germany.

A limitation of the analysis is that most of the r^2 are low. In the discussion the researchers will concentrate on a few, statistically significant, and interesting results, i.e. the influence of:

- Fear on Food & Grocery Purchase
- Fear on Toiletry Purchase
- Fear on PPE Purchase
- Fear and stress on Alcohol Beverage Purchase

TABLE 6
UNIVARIATE REGRESSION ANALYSES FOR TOTAL SAMPLE (SOUTH AFRICA & GERMANY)

Product Category	R Square		Standardized Coefficients					
	Adj. R Sq.	Sig.	Coeff Fear	Sig. Fear	Coeff Utilitarian	Sig. Utilitarian	Coeff Stress	Sig. Stress
Pre Grocery	0,084	0,000	0,271	0,000	0,047	0,113	-0,024	0,353
Lockdown Grocery	0,063	0,000	0,259	0,000	0,001	0,968	-0,031	0,239
Post Grocery	0,079	0,000	0,310	0,000	-0,045	0,126	-0,044	0,092
Pre Alc. Beverages	0,050	0,000	-0,219	0,000	-0,028	0,359	0,042	0,116
Lockdown Alc. Beverages	0,129	0,000	-0,347	0,000	-0,050	0,082	0,090	0,000
Post Alc. Beverages	0,077	0,000	-0,277	0,000	-0,024	0,411	0,071	0,006
Pre Clothing	0,012	0,000	-0,101	0,000	-0,036	0,239	0,057	0,035
Lockdown Clothing	0,029	0,000	-0,137	0,000	-0,075	0,014	0,047	0,080
Post Clothing	0,011	0,000	-0,040	0,172	-0,096	0,002	0,021	0,427
Pre Leisure	0,047	0,000	-0,239	0,000	0,035	0,247	0,016	0,540
Lockdown Leisure	0,055	0,000	-0,230	0,000	-0,022	0,427	0,014	0,603
Post Leisure	0,048	0,000	-0,181	0,000	-0,082	0,006	0,051	0,054
Pre Toiletry	0,128	0,000	0,333	0,000	0,032	0,263	0,031	0,226
Lockdown Toiletry	0,069	0,000	0,219	0,000	0,075	0,012	0,000	0,992
Post_Toiletry	0,106	0,000	0,331	0,000	-0,007	0,802	0,003	0,901
Pre DIY	0,003	0,051	-0,071	0,014	0,000	1,000	0,012	0,665
Lockdown DIY	0,015	0,000	-0,097	0,001	-0,058	0,057	0,030	0,272
Post DIY	0,008	0,001	-0,056	0,054	-0,067	0,029	0,024	0,375
Pre PPE	0,034	0,000	0,157	0,000	0,060	0,048	-0,022	0,408
Lockdown PPE	0,033	0,000	0,143	0,000	0,071	0,020	-0,011	0,671
Post PPE	0,061	0,000	0,258	0,000	-0,004	0,896	-0,031	0,240

Highly significant (p < 0,01)   Significant (p < 0,05)

TABLE 7
UNIVARIATE REGRESSION ANALYSES FOR SOUTH AFRICAN SAMPLE

Product Category	R Square		Standardized Coefficients					
	Adj. R Sq.	Sig	Coeff Fear	Sig Fear	Coeff Utilitarian	Sig Utilitarian	Coeff Stress	Sig Stress
Pre Grocery	0,002	0,206	0,029	0,533	0,065	0,163	-0,006	0,887
Lockdown Grocery	0,001	0,267	0,091	0,054	-0,027	0,564	-0,033	0,428
Post Grocery	0,012	0,012	0,156	0,001	-0,082	0,077	-0,031	0,460
Pre Alc. Beverages	-0,001	0,566	-0,044	0,356	-0,023	0,618	0,022	0,600
Lockdown Alc. Beverages	0,002	0,228	0,041	0,390	-0,076	0,102	0,060	0,152
Post Alc. Beverages	0,004	0,117	-0,062	0,188	-0,021	0,657	0,090	0,030
Pre Clothing	0,001	0,279	-0,068	0,151	0,072	0,121	0,036	0,386
Lockdown Clothing	-0,003	0,862	0,014	0,765	-0,032	0,495	0,026	0,538
Post Clothing	-0,004	0,968	0,002	0,973	0,007	0,889	-0,021	0,617
Pre Leisure	0,003	0,186	0,028	0,552	0,070	0,132	-0,013	0,755
Lockdown Leisure	-0,001	0,489	0,030	0,531	0,021	0,650	-0,061	0,148
Post Leisure	-0,001	0,512	-0,024	0,616	0,001	0,991	0,063	0,135
Pre Toiletry	0,038	0,000	0,193	0,000	0,018	0,693	0,007	0,864
Lockdown Toiletry	0,019	0,001	0,123	0,009	0,061	0,186	-0,047	0,253
Post Toiletry	0,034	0,000	0,198	0,000	-0,018	0,695	0,021	0,607
Pre DIY	0,017	0,002	0,105	0,026	0,047	0,309	0,024	0,557
Lockdown DIY	-0,001	0,480	0,065	0,170	-0,002	0,967	-0,011	0,794
Post DIY	0,001	0,321	0,082	0,085	-0,056	0,237	0,013	0,762
Pre PPE	0,024	0,000	0,111	0,017	0,082	0,075	-0,003	0,939
Lockdown PPE	0,022	0,001	0,053	0,252	0,135	0,004	-0,031	0,458
Post PPE	0,042	0,000	0,217	0,000	0,016	0,729	-0,044	0,286

Highly significant (p < 0,01)   Significant (p < 0,05)

TABLE 8
UNIVARIATE REGRESSION ANALYSES FOR GERMANY

Product Category	R Square		Standardized Coefficients					
	Adj. R Sq.	Sig	Coeff Fear	Sig. Fear	Coeff Utilitarian	Sig Utilitarian	Coeff. Stress	Sig Stress
Pre Grocery	0,010	0,005	0,108	0,001	0,020	0,581	0,007	0,844
Lockdown Grocery	0,003	0,115	0,078	0,021	0,002	0,961	0,003	0,926
Post Grocery	0,003	0,131	0,038	0,261	-0,052	0,164	-0,040	0,267
Pre Alc. Beverages	0,000	0,396	-0,049	0,151	-0,018	0,626	0,029	0,417
Lockdown Alc. Beverages	0,001	0,292	-0,048	0,157	-0,015	0,683	0,049	0,178
Post Alc. Beverages	-0,001	0,629	0,036	0,291	0,018	0,630	-0,006	0,866
Pre Clothing	0,006	0,031	0,008	0,815	-0,103	0,005	0,075	0,039
Lockdown Clothing	0,007	0,027	-0,039	0,245	-0,091	0,015	0,039	0,281
Post Clothing	0,022	0,000	0,046	0,172	-0,179	0,000	0,061	0,091
Pre Leisure	-0,002	0,739	-0,034	0,312	0,024	0,513	-0,013	0,725
Lockdown Leisure	-0,002	0,680	0,027	0,424	-0,039	0,289	0,021	0,557
Post Leisure	0,011	0,005	0,041	0,222	-0,121	0,001	-0,002	0,949
Pre Toiletry	0,020	0,000	0,098	0,004	0,015	0,678	0,091	0,011
Lockdown Toiletry	0,023	0,000	0,096	0,004	0,060	0,104	0,069	0,053
Post Toiletry	-0,002	0,791	0,029	0,391	-0,027	0,463	0,010	0,784
Pre DIY	0,001	0,235	0,043	0,207	-0,016	0,669	-0,053	0,145
Lockdown DIY	0,004	0,094	0,045	0,181	-0,089	0,016	0,031	0,392
Post DIY	0,002	0,165	0,048	0,156	-0,067	0,070	-0,007	0,849
Pre PPE	0,013	0,002	0,111	0,001	0,045	0,222	-0,047	0,192
Lockdown PPE	0,010	0,005	0,106	0,002	0,011	0,769	0,025	0,493
Post PPE	0,007	0,018	0,102	0,002	-0,044	0,229	-0,022	0,547

Highly significant (p < 0,01)   Significant (p < 0,05)

Hypothesis 2: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on purchasing of food and groceries during COVID-19.

The hypothesis is accepted.

Figure 2 indicates the influence of fear on purchasing food and groceries during the pandemic. The numbers depicted in the figure are the coefficients of the regression analysis described above. Fear indicate a mostly highly significant influence on purchasing food and groceries. The higher a millennials' COVID-19 specific fear, the more food and groceries he/she buys. This applies to all three phases of COVID-19 namely: pre, during and after lockdown.

Hypothesis 3: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on toiletry purchasing during COVID-19.

The Hypothesis is accepted.

Figure 3 indicates the influence of fear on toiletry purchases. The results suggest that in total, fear has led to a rise in toiletry purchases, especially pre and post lockdown. In Germany, fear increases purchasing of toiletries equally,

especially pre and during lockdown. South African respondents registered lower levels of purchases for toiletries as compared to German respondents. Since German millennials could purchase online, these possibilities were not available to majority of SA millennials, as there were fewer stores selling online.

Hypothesis 4: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on PEE Purchases made during COVID-19 pandemic.

The Hypothesis is accepted.

As denoted in Figure 4, the results suggest the influence of fear on PEE purchases. The results indicate that the influence in Germany is stable and on a lower level. In contrast, within South Africa, the influence increases mainly before and after Lock down stage 4 & 5, where many non- essential businesses were shut down.

Hypothesis 5: There is a statistically significant influence of fear and stress on the purchase of alcoholic beverages during the different stages of the lockdown.

The Hypothesis is accepted.

In Figure 5, the influence of fear and stress on the purchase of alcoholic beverages is shown. Because of the significance, the results concentrate on the total sample. In total, it is clear that the higher the fear, the fewer alcoholic beverages are bought by millennials' during COVID-19.

FIGURE 2
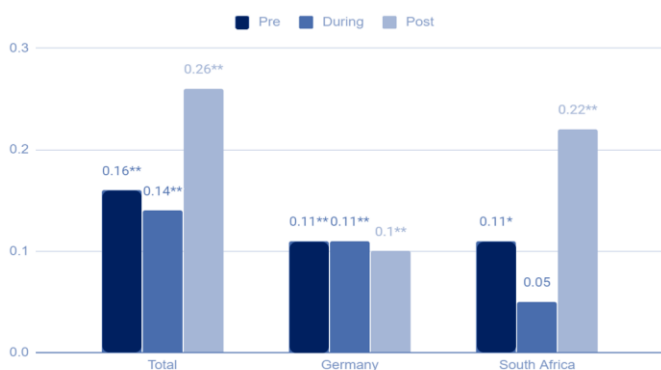**REGRESSION COEFFICIENTS OF FEAR AND FOOD & GROCERY PURCHASE**
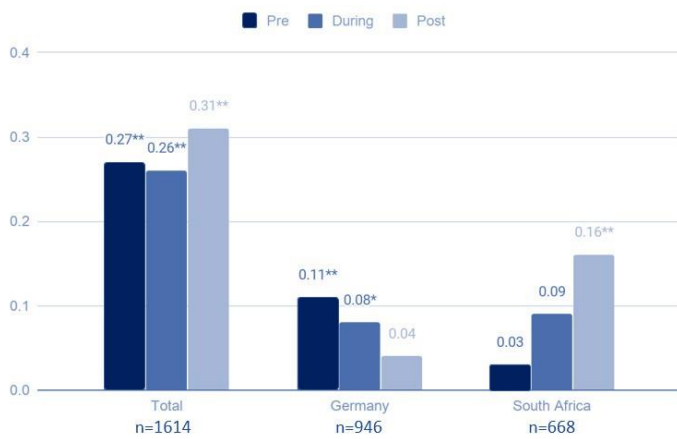
** highly significant * significant

FIGURE 3
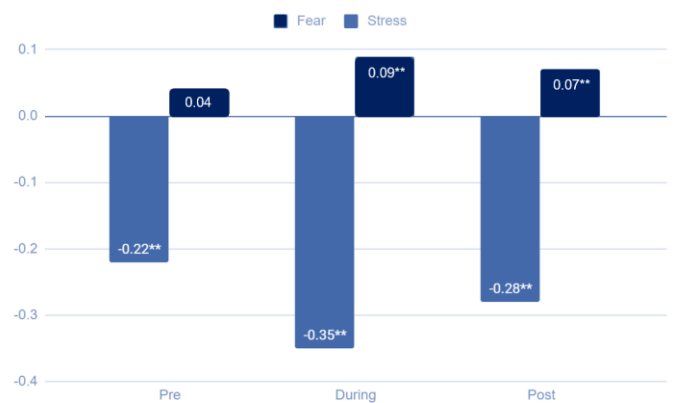**REGRESSION COEFFICIENTS OF FEAR AND TOI-LETRY PURCHASE**
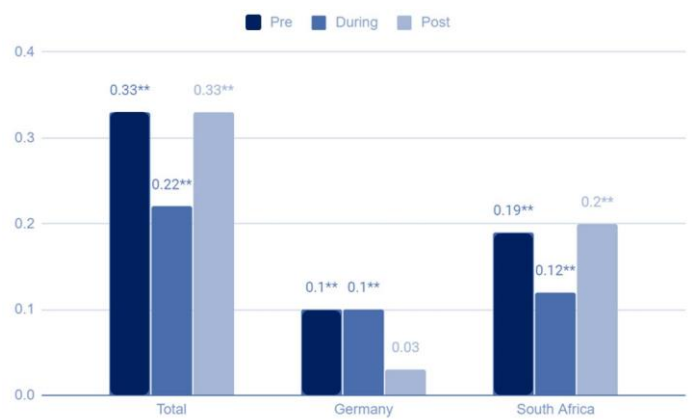
** highly significant   * significant

FIGURE 4
REGRESSION COEFFICIENTS OF FEAR ON PPE PURCHASE

** highly significant   * significant

FIGURE 5
REGRESSION COEFFICIENTS OF FEAR AND STRESS AND ALC. BEVERAGE PURCHASE (IN TOTAL)

** highly significant   * significant

DISCUSSION

Hypothesis 1: There is a statistically significant difference between the COVID-19 specific personality traits in South Africa and Germany.

The higher value for the South African respondents' relating to the COVID-19 specific fear could be attributed to South Africa having a very high infection rate as compared to Germany. In SA, millennials fear contracting COVID-19 during shopping.

In South Africa, due to the pandemic, millennial customers are inclined to want convenience and easy access to stores. They would rather frequent shops that are close to them. They would also want to frequent stores that have fewer shoppers, to make their shopping experience easier and more enjoyable. Since they want to avoid malls and crowed stores because they fear becoming infected, it is understandable why millennial shoppers' utilitarian scores for the South African millennial respondents are higher than the German millennial respondents. Vinerean (2013:35) states that: "Utilitarian consumer behaviour has been described as task-oriented and rational in that customers' functional utility is dependent on whether their consumption needs, which inspire the shopping, were met successfully." Kim (2002:434) add that these customers look for a shopping experience that is convenient and makes their lives more enjoyable and easier.

High stress-levels for both South African and German respondents is understandable, given that COVID-19 has brought on new regulations and safety requirements during shopping. Wearing the face mask is stressful for millennials who have chronic asthma and other respiratory diseases and can impact on how often they shop. South African respondents could have added stress brought on by the new strict shopping regulations. The customers' have to wear masks, and a limited number of shoppers are allowed in a store. Due to negligence by some store managers, who do not abide by the rules, this makes social distancing very difficult to adhere to, thus adding to SA respondents' stress levels being higher than the German respondents. During COVID-19, shopping has become more stressful, due to wearing a mask, than previously in both countries. This can alter buying behaviour as respondents, during the pandemic, no longer see shopping as relaxing, but somewhat stressful. Also, in SA, many people are wearing the masks incorrectly, so this causes higher stress levels reported in the study by the SA respondents who are afraid of contacting the virus during their shopping encounters.

Hypothesis 2: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on purchasing of food and groceries during COVID-19.

The higher the fear of respondents during COVID-19, the more they purchased. Yoon, Narasimhan and Kim (2018:3615-3616) suggest that spending at retail outlets increased significantly in preparation for impending disasters to prepare for the unknown. According to Hall, Prayag, Fieger, & Dyason (2020:8) hoarding behaviour before or during a disaster can be viewed as a form of self-protection behaviour. The results indicate a further development in both countries. In Germany, the impact of fear on grocery shopping decreases throughout the three phases, whilst in South Africa, it rises. The researchers believe that as the infection rate rose during the different stages of lockdown, there was an increase in mass purchases, as millennial shoppers felt they had to mass buy as a way to survive the pandemic. The results concur with literature. Upton and Nuttall (2014:1499-1500) add that product supply is susceptible to oscillatory behaviour when faced with abrupt changes in demand, such as panic buying and stockpiling. Independent supermarkets have also been affected by the high demand for food products. According to Bachelor (2020:1) the food sector, including food distribution and retailing, has been put under strain as a result of people panic-buying and stockpiling on food.

Hypothesis 3: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on toiletry purchasing during COVID-19.

The results indicate that in total, fear led to a rise of toiletry purchases, especially pre and post lockdown. Regarding the results in South Africa, higher levels of fear contribute to higher purchases of toiletries mainly, pre and post lockdown. During lockdown, fewer toiletries were purchased in South Africa probably because of no stocks available. Hand wash became very sought after and, people were buying in bulk thus leading to stocks running out and shelves being cleared out. Certain toiletries were also imported and were not available as they were either stuck at ports or

still on the way to the shops. The strict regulation during stage 5 and 4 lockdown in SA made it difficult for certain exclusive retail outlets, which kept stock of SA millennials' exclusive toiletries, to be open, as they were considered stores that were selling non-essential products. Since, only some consumers had online-shopping possibilities, it was conceivably the reason why the South African millennials registered lower purchases of toiletries as opposed to the German millennials. Added to this, was the continued load shedding, which made online shopping difficult for South African shoppers as opposed to German shoppers. In Germany, online shopping is much more aggressively practised by conventional retailers than in SA.

Hypothesis 4: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on PEE purchases made during COVID-19 pandemic.

South African respondents registered a higher purchase of PPEs. Due to fear of contracting the virus and as a protective and preventative measure, SA millennials bought more PPEs. In SA, masks were in big demand. Fear propelled millennials' in SA to purchase more PPEs than in Germany. Research conducted by Yuen et al. (2020:1) in response to the coronavirus established four key factors causing panic buying: (1) perception, (2) fear of the unknown, (3) coping behaviour and (4) social psychology. They concluded that when consumers perceived the probability and consequences of contracting a disease to be high, they were motivated to undertake self-protective activities, including panic buying, to minimise perceived risk. The findings concur with literature, as purchases of masks increased since millennials in both countries feared becoming infected with the virus. High volumes of mask sales were reported in the study in both countries, as millennials' saw the use of masks as a preventative measure to limit the spread of the virus.

Hypothesis 5: There is a statistically significant influence of fear and stress on the purchase of alcoholic beverages during the different stages of the lockdown.

The millennials are very influenced by health issues and over-indulgence in alcohol during the pandemic could be seen as a form of risky behaviour towards their health and immune system. This could possibly be why alcohol sales dropped. In South Africa, millennials feared the police, as alcohol was banned during lockdown stage 5 & 4, resulting in low sales in South Africa for liquor. Referring to the personality trait stress, results are contrary. They indicate that the higher levels of stress led to higher purchase of alcoholic beverages in all phases of the pandemic. This is accordant, as indulging in alcohol is seen as a way of de-stressing. The millennials believed that alcohol could serve as a de-stressing mechanism when they were hearing frightening and scary accounts of COVID-19 in the media on a daily basis. Millennials' in both countries felt that purchasing alcohol before, during and after the pandemic could ease their stress and lighten their burden in these COVID-19 times. The millennials' in SA who reported buying alcohol during lockdown stage 4 and 5 could have done so illegally.

RECOMMENDATIONS

A recommendation is that marketers' use the information provided in the study to understand how fear and stress impact on millennials' buying patterns during COVID-19. Marketers' should also focus their attention on how fear and stress are driving the sales of PPEs. PPEs, mostly masks and gloves, are very popular and in high demand in the world during the pandemic. PPEs, masks and hand sanitisers prevent the spread of COVID-19. They are essential products purchased by millennials.

A basic survivalist instinct propels millennials towards purchasing more of these essential products. Marketers can learn from this study and understand how to categorise essential products and develop reliable supply chain channels to ensure their timeous availability and supply during a pandemic or health crisis. PPEs are highly valued goods, and stores should maintain high supplies of these goods during such periods.

Alcohol sales were low during the COVID-19 period. Marketers should recognise that millennials looked at what products could keep them healthy and protect them during the pandemic and these were priority purchases. SA banned alcohol sales, and marketers' need to address concerns on what products to market during a pandemic. They should also reflect on bans and restrictions placed on products during a pandemic so that they can prepare in advance for

such events. Alcohol has also been viewed as a buffer used by people to reduce stress. This can reassure marketers' that even during a health crisis or pandemic millennials, would buy alcohol, even illegally. Marketers' should learn to anticipate in time when bans can be placed on alcohol so that alcohol stocks are present before restrictions and when restrictions are lifted.

Food was an essential item required during a pandemic by millennials. Mass purchasing behaviour was high, as millennials were afraid about possible food restrictions placed on certain imported foods and stockpiled on these foods. Millennials' were also fearful of contracting the virus during shopping, so they bought in bulk to ensure that they had enough rations to survive on over a long period. Marketers' can learn from this, and make sure that during a pandemic or health crisis, shelves in stores should be well stocked with food. Good supplier networks need to be in place during a pandemic to ensure the steady supply of food within retail stores.

Since fear about contacting the virus during shopping, is a significant concern by millennials, marketers should provide this techno-savvy market segment with more online shopping options. Germany is a developed country and has more excellent online options in comparison to SA. Retail outlets in SA have a duty and obligation to move onto digital platforms to increase their sales during a health crisis or pandemic situation.

CONCLUSION

The millennial market segment is an exciting segment with a very high buying power potential. It is imperative that marketers gain more advanced knowledge about millennials and their perceptions, needs and buying patterns in the global marketplace. During COVID-19, marketing information gathered on the consumer behaviour and buying habits of millennials, who are a very active and dynamic market segment, can be very advantageous for a marketer. The marketer is in a favourable position, as a pandemic of this magnitude is a new phenomenon. Having crucial information on this segment provides a competitive advantage for the firm. Keeping abreast of the needs of the millennials' and what drives them, can be instrumental in winning over their customer loyalty in the marketplace-thus resulting in satisfied customers, as well as higher financial returns for the company or retail outlet.

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ACKNOWLEDGEMENT