

## **Exploring Panic Buying Behavior During Covid-19 Pandemic: An Applied Study On Hypermarkets Shoppers in Egypt**

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### **Abstract:**

This article investigates the influence of emotional and social factors on panic buying during the COVID 19 pandemic. This article focuses on group of independent variables which comprises Emotional factors measured by (fear of missing out – worry – regret) and Social factors (social media rumors – observational learning), Precautions awareness and Anxiety. While the dependent variable is the Panic Buying Behavior and the demographics as a moderator variable. Moreover, there are insufficient data about the effect of a group of emotional and social factors on panic buying in Egypt. So, this research can help to a greater understanding of these characteristics and, consequently, the motivations for panic buying behavior. The current study is based on quantitative data collected from an Egypt-wide survey of hyper market buyers. In this regard, the utility of this research lies in the fact that it permits the identification of major concerns and the formulation of essential conclusions. In the presence of demographics as a moderator variable, the results of this study indicate that dependent

variables can explain approximately 68% of the variance in panic buying behavior.

**Keywords:** COVID-19, Panic Buying, Fear, Worry, Regret, social media, Precautions Awareness, Anxiety.

## 1. Introduction

On March 11, 2020, the World Health Organization (WHO) declared the new coronavirus (COVID-19) a global pandemic (World Health Organization, 2020). According to (Chakraborty, 2020) as a result of the emergence of the (COVID-19) pandemic, the global level of fear and anxiety increased, causing panic buying (Dos Santos et al., 2020). As per (Dos Santos et al., 2020) study, the widespread stockpiling and panic buying caused by the COVID-19 pandemic emptied store shelves for weeks in many regions. Moreover, the findings of (K.F. Yuen et al., 2022) revealed that panic buying is primarily a psychological response to an extreme occurrence; nevertheless, it is also a socially relevant activity, since our perception of a crisis can be influenced by our observations and interactions within society.

Infrequently spotted, so it remains an area of consumer behavior study that has not been adequately examined. In lining with the previous, the study of (Alfuqaha et al., 2022) also related with emotions of panic, elevated anxiety, wrath, diminished rational and emotional responses.

So, this research is focused on studying the influence of emotional and social factors on panic buying during the COVID 19 pandemic. Whereas, the group of components includes emotional factors measured by (fear of missing out – worry – regret) and social factors (social media rumors – observational learning).

## **2. Literature review and Hypotheses Development**

### **2.1 Emotional Factors**

There is some justification for stockpiling before a disaster or pandemic strikes (Sheu et al., 2020), which is consistent with the findings of the (Chen et al., 2016) study indicating that stockpiling daily necessities gives respite from unforeseen circumstances. During the pandemic, individuals stocked up on food and necessities to ease their dread and anxiety (Leung et al., 2021). The hoarding resembles panic buying because it entails purchasing a large quantity of specified items (Zheng et al., 2020).

There are several reasons for this behaviour. Firstly, it could be an indicator of a conflict between the desire to continue normal routines and the uncertainty of the pandemic's time span limiting access to daily necessities, which leads to panic buying to alleviate the conflict (K.Sim et al., 2020). Second, it is a means of surviving challenging situations (with information of increasing numbers of sick people and deaths worldwide). When food and everyday necessities are preserved for even a little

period of time, self and family defence becomes the priority. Thirdly, it may be a reaction to a loss of control over the future and social pressure to repeat the same conduct.

Preparing for the unexpected by storing supplies of basics can be reassuring (Chen et al., 2016). Anxiety and worry may lead to panic buying if people believe that stocks will soon become scarce or the price will continue to rise. People may have been led to make aggressive, emotional purchases due to a "herd mentality," wherein they followed the actions of those around them (Muchnik et al., 2013).

In addition, the (Vacondio et al., 2021) study revealed that when people anticipate risks and dangers, they become anxious and more active in self-protection actions, since anxiety motivates people to defend themselves as a coping strategy.

In addition, (Kaur and Malik, 2020) suggests that expected regret drives panic purchase due to the perception of shortage. A common definition of regret is the unpleasant feeling people feel while thinking about how alternate choices or actions might have improved a certain circumstance (IResearchNet,2020). Whereas regret is typically experienced after the fact, anticipatory regret comes before a decision is made when a person imagines the regret he will likely feel if he chooses a certain option (Somasundaram and Diecidue, 2017; Wong and Kwong, 2007).

Amin et al. (2018) came to the same conclusion, finding that consumers are regret averse, as they also discovered that regret foreboding enhanced consumers' efforts in their behavioral intents. This set of assumptions may be useful, considering the seriousness and unpredictability of a pandemic breakout (Jin et al., 2020). In times of shortage, people also become more protective of the things they have but don't actually need (Byun and Sternquist, 2012). Based on the previous, the researchers are proposing the following hypothesis:

**H1: There is a significant relationship between emotional factors and panic buying behavior.**

## **2.2 Social Factors**

The core concept behind social learning theory is that people pick up norms and behaviors from others around them. An individual's impression of a crisis's severity and scope may be heavily influenced by their peers' reports and reactions (Nabavi, 2012). Others may start to imitate the panic buying as they notice more of it for a variety of reasons, including FOMO (fear of missing out), anticipated regret, or simple herd mentality (following the majority). Retailers and stores are likely to run out of supplies if there is significant panic buying, which in turn may make people feel the outbreak is direr or scarcer than it actually is.

Social learning via social media has significant effects on both customers' anxiety of product shortage and panic buying, but social learning via conventional media had no effect on either according to (Huan et al., 2021). The results also showed that consumers' panic buying can cause them to feel more unpleasant emotions, demonstrating the need of addressing such unusual purchasing behaviors.

In addition, social media enhanced the perception of product scarcity in the context of media coverage of those engaging in stockpiling. There has been an upsurge in the use of social media platforms to allow users to express their emotions and thoughts on certain issues in various societies (Boulianne, 2015).

One of the main aspects of social learning theory is that individuals will mimic the behaviours of those around them based on what they have observed (Bandura, 1977). A person's opinions and those of the individuals with whom they often engage can have a significant impact on their purchasing decisions.

Consumers may feel compelled to start stockpiling after hearing news reports or seeing social media posts about the phenomenon, according to a published study by (Van Bavel et al., 2020). Especially, that in the very beginning of the pandemic, people didn't know much about it, so the news they heard had the potential to shape their perspectives on the problem and influence their decisions about how to respond.

The spread of false information about COVID-19 can be slowed by spreading accurate information about the virus through the internet, smart phones, and digital platforms; daily essentials can be reassured; and positive psychological and social support can be encouraged during the pandemic. In addition, health platforms have the potential to provide vulnerable populations with psychological help for overcoming anxiety and isolation (Depoux et al., 2020).

A recent study demonstrated that customers' inclinations to engage in panic buying are amplified by incorrect information spread in the news media (Taylor, 2021). In particular, people's fear and distress associated to pandemics might be triggered by news stories and photos of empty shelves, rumors, leading to panic shopping.

Moreover, the study of (Zheng et al., 2020) and other research teams (Ahmad & Murad, 2020; Leung et al., 2021) braced the idea of social learning through social media and have found that social media can be an effective tool for fostering group learning. Some researchers in Iraq have looked into the impact of social media on mental health and dread of COVID-19 (Ahmad and Murad, 2020). According to the data, Facebook was the primary medium exploited to disseminate false information on COVID 19 in Iraq. That has to do with the detrimental effect that using social media has on people's mental health. One further

study demonstrated the emotional drivers of public worry as negative social media posts that propagate rumors about goods shortages (Leung et al., 2021).

Under the threat of a disruption in the supply chain, Zheng et al. (2020) investigated the impact of social learning on consumers' worries and purchasing decisions.

While Huan et al. (2021) ended up with the conclusion that there are no statistically significant effects of traditional media on social learning; they did find that social media had a significant impact on panic buying when it was tied to concerns about a product's availability. The researchers propose the following hypothesis based on prior findings:

**H2: There is a significant relationship between social factors and panic buying behavior.**

### **2.3 Precautions Awareness**

During the COVID-19 pandemic, it is important for people to be aware of the importance of taking precautions to protect themselves and their loved ones from the spread of the disease (Mukhlis et al., 2022). Generally speaking, a knowledge of Precautions may serve as a remedy for such actions. Personal protection equipment, hand cleanliness, and social distance are all things that should be kept in mind.



The most effective method of preventing the spread of COVID-19 is the continued promotion of standard precautions, such as the use of protective gear (such as masks and gloves) and regular hand washing (Ton et al., 2020). Protect yourself and your loved ones from the COVID-19 pandemic by staying indoors, maintaining a six-foot distance from others, and always wearing your PPE (Gasmi et al., 2020; Zhong et al., 2020). Feelings of panic can be mitigated by taking basic safety measures (such as wearing protective gear and washing your hands) (Arafat et al., 2021a; Clements, 2020).

The ability to manage and comprehend information regarding the pandemic's spread, as well as lower levels of fear, panic, and anxiety, have all been associated with heightened awareness of the need to take precautions (Lee and Lee, 2019; Mishra et al., 2016). Accordingly, lack of precautions awareness among the people is considered as the key challenge (Alfuqaha et al., 2022). Each study (Khan, 2020; Long and Khoi, 2020) concluded that the pandemic scenario would encourage consumers to stock up on reserve products and services. High customer risk perception and high-risk Precautions knowledge during the COVID-19 epidemic led to this panic buying behaviour.

Therefore, it is crucial to assess how people's knowledge of COVID-19 precautions (such as PPE, hand hygiene, spreading rumours, and social isolation) correlates with their subsequent panic buying behaviour. and this research aims to explore the

role that precautions awareness COVID-19 plays in reducing panic buying. Based on past findings, the researchers offer the following hypothesis:

**H3: There is a significant relationship between Precautions awareness and panic buying behavior.**

## 2.4 Anxiety

Panic buying occurred in several countries as a result of the (COVID-19) pandemic, which heightened levels of worry and terror in the general public (Chakraborty, 2020). (Dos Santos et al., 2020). In order to cope with their fears during the pandemic, many people stocked up on food and other supplies (Leung et al., 2021). Panic buying, or the practise of buying an excessive amount of a product, describes the stockpiling behaviour (Zheng et al., 2020).

The widespread nature of this behaviour has been documented, and it could have numerous causes (K.Sim et al., 2020). One explanation is that people are trying to alleviate their anxiety and calm themselves down by making impulsive purchases in an attempt to preserve their normal routines despite the uncertainty of how long the pandemic will last. Second, during national lockdowns, it's a technique to deal with the stress of having one's own and one's community's survival at stake (in the face of constant reports of mounting numbers of infected people and deaths globally). When food and daily supplies are

secured, even if only for a short time, the coping response is an act of self- and family-preservation. Finally, it could be a response to the inability to determine one's own future and the societal mandate to behave in a similar manner. Based on what has come before, the researchers have come up with the following hypothesis:

**H4: There is a significant relationship between anxiety and panic buying behavior.**

## **2.5 Panic Buying Behavior**

The consumer reaction to an unexpected crisis is unpredictable. Panic buying, or "buying in huge quantities of a particular product or commodity due to immediate fears of a potential shortage or price surge," is a regularly observed behavioral response according to (Lexico, 2020). In another definition of "panic buying," which focuses on people stocking up in advance of a scarcity (Sim et al., 2020). In line with the findings of (Alfuqaha et al., 2022), panic buying happens when people make excessively large purchases despite the fact that they are not really in need of the items they are buying (bread, rice, vegetables, fruits, toilet paper, and disinfecting products). The panic buying is not considered a new phenomenon and has been noticed in multiple historical events. It is unpleasant behavior as it damages the society's resources and supply chain systems (Arafat et al., 2020).

While panic buying may be understood as a psychological response to a shocking incident, it is also a socially significant conduct since our understanding of a crisis is influenced by our exposure to and engagement with the wider society (K.F. Yuen et al., 2022). It has been noted that various countries have seen stockpiling of a common household item (Jankowicz, 2020). News and social media coverage of this phenomena at a global scale sent shockwaves through supply and demand networks. According to, panic buying is uncommon, therefore studying it is still a topic in consumer behavior that has not been thoroughly investigated (Kirk et al., 2020).

Anxiety, despair, social isolation, and lack of available goods have all been identified as potential causes of panic buying (Singh et al., 2021; Yuen et al., 2021). Hence, panic buying is a coping method used to reduce worry and boost perceptions of food security (Singh et al., 2021).

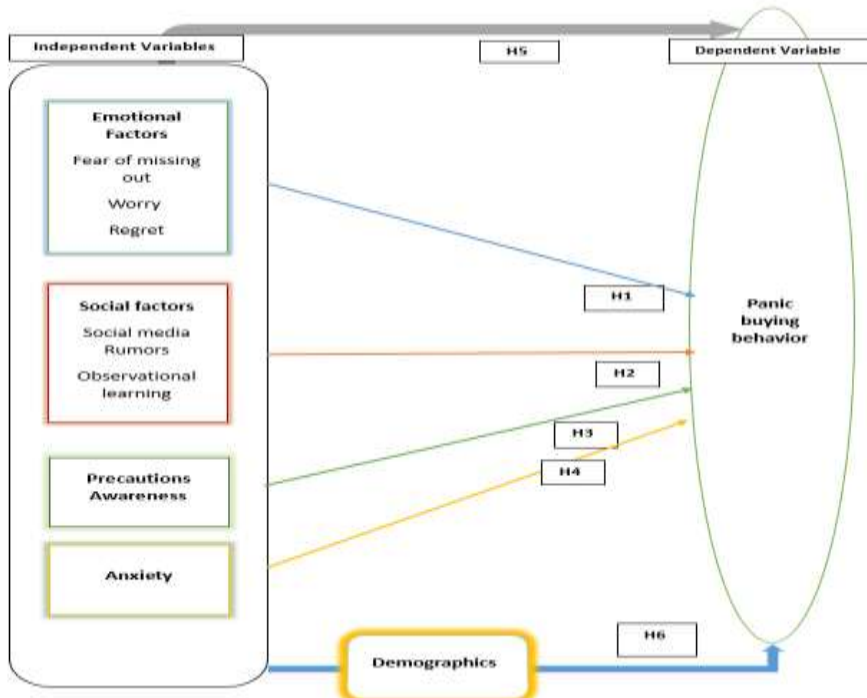
Panic buying has been linked to alleviating stress and anxiety during times of disaster, as seen in responses to prior global crises. Emotions may drive the response to fear in order to preserve mastery over the conflicting feelings despite the fact that fear is impacted by the sense of actual and perceived threat. At times of economic or epidemic distress, people may feel the need to hoard food and other needs as a means of temporarily relieving their anxiety and regaining some sense of control (Chen et al., 2016).

Moreover, age was found to be a main predictor of panic buying behavior in the study by (Alfuqaha, Aladwan, Al Thaher, and Alhalaiqa, 2022), which also indicated that being single and being young were positively related with panic buying behavior. From the previous, the researchers have developed the following hypotheses:

**H5: There is a significant relationship between (emotional factors, social factors, precautions awareness, anxiety) and panic buying behavior.**

**H6: There is a significant relationship between (emotional factors, social factors, precautions awareness, anxiety) and panic buying behavior moderated by the demographics.**

### 3. Conceptual Framework of the Research



**Figure (1) Proposed Research Framework**

Source: Developed by the Researchers

## **4. Research Methodology**

### **4.1 The Sampling Plan**

The study population is as follows:

- a- Shoppers with age range between 18 and 24 who are capable of making their own purchasing decisions when shopping at a hypermarket or a supermarket (18 – 65).
- b- All Hypermarkets and supermarkets all over Egypt.

The research sample is a convenience sample of Cairo consumers that was selected at random. There being no preexisting framework within this community, the researchers present a sample of 384 respondents with a 95% confidence coefficient and 5% error limitations.

### **4.2 Questionnaire Design**

For empirical analysis and for estimating the model to enable testing of hypotheses, the researchers designed and administered a survey that was developed to collect the current research's primary data and to allow us to access a nationwide sample in a secure manner to measure items for all variables. The purpose of the survey was to determine why Egyptians do panic buying and their perception to COVID-19 precautions.

The survey was designed to identify the shoppers' views on shopping patterns during pandemic thus indicating the shoppers' views for emotional, social, precautions awareness,

anxiety level and panic buying behavior. Participants were asked about their buying behavior and attitude during the COVID-19 pandemic lockdown. Respondents were required to be at least 18 years old and to reside in the Arab Republic of Egypt. The sampling was appropriate because the pandemic was not under control in Egypt. Data collection was performed in the winter of 2022, so the timing fits with seeking to understand the antecedents and consequences of panic buying behavior.

The researchers invited participants who met the inclusion criteria which are; Egyptians with a minimum age of 18, who can read Arabic language. The questionnaire was formatted in both Arabic and English languages. All questions except the demographic information used 5-points Likert-scale, from strongly disagree to strongly agree weighted from 1 to 5, to measure the respondents' agreement level towards the designed statements.

### **4.3 Data analysis**

SPSS V.26 is utilised for statistical data analysis. Data was subjected to a variety of analyses, including analyses of reliability, correlation, and regression.

## **5. Statistical Analysis and Research Results**

### **5.1 Reliability and intrinsic validity for research dimensions**

Cronbach's Alpha reflects reliability of statements as ranges from 0.683 to 0.925. Also the values of average item correlation indicate the validity of the questionnaire.



The results of the Factor Analysis show that all items are loaded in their constructs as suggested in the proposed model, as most of the loadings of all items are greater than 0.5. Also, AVE values indicate that the constructs could explain more than 50% of the statements which indicate high internal validity.

## 5.2 Descriptive statistics of the study framework variables

In this section, the researcher provides detailed descriptive statistics and analyses for the model's constructs. The descriptive analysis is comprised of the following: Minimum, Maximum, Mean, Standard Deviation, and Coefficient of Variation for each statement.

**Table (1): descriptive statistics of model's constructs**

Variable Name	Sample Size	Minimum	Maximum	Mean	Standard Deviation	COV
Emotional Factors	384	1.01	5.01	3.225	1.03312	32.03%
Social Factors	382	1	5	2.6649	1.07447	40.32%
Awareness	384	1.75	5	4.1113	0.57963	14.10%
Anxiety	382	2	5	3.5166	1.06189	30.20%
Panic Buying Behavior	384	1	4.67	2.8793	0.89687	31.15%

From the previous table, the below results are concluded:

Respondents tend to neutrally agree with all the statements related to Emotional Factors as the mean values are between 2.5 and 3.5. Likewise, respondents tend to neutrally agree with all the statements related to Social Factors as the mean values are between 2.5 and 3.5.

While, they tended to agree with the statements related to Precautions Awareness as the mean values are between 3.5 and 4.5, and the statements related to Anxiety as the mean values are between 3.5 and 4.5.

As for the statements related to Panic Buying Behavior, respondents tended to neutrally agree since the mean values are between 2.5 and 3.5.

The variable with the highest agreement is "Precautions Awareness" while the one with the lowest agreement is "Social Factors". In addition to the homogeneous variable, with lowest variance, is the "Precautions Awareness" with COV equals 14.10% while the non-homogeneous variable, with highest variance, is the "Social Factors" with COV equals 40.32%.

The gender distribution among participants showed a percent of 73.7% represented by females and a percent of 26.3% of male participants. Meanwhile, the Age distribution among the research sample revealed that 5.2% among survey participants aged from 18 to 24 years old followed by 26% of the participants aged from 25 to 34 years old, 43.2% of the participants aged from 35 to 44 years old, 11.5% of the participants aged from 45 to 54 years old, while 4.2% of the participants aged from 55 to 64 years old and 9.9% of them aged 65 years old and above.

The Educational Level distribution illustrates that only 0.5% of survey participants acquired a high school followed by 39.3% of the participants had pursued BSc while 60.2% of the

participants did acquire a higher degree, and the Marital Status distribution showed that 20.1% among survey participants are single followed by 72.7% of the participants are married, 5.7% of the participants are divorced, and 1.6% of them are widowed.

Ending with the Income Level distribution revealed that 38.8% among survey participants obtained income below 6,000 EGP followed by 47.4% of the participants obtained income ranged from 6,000 to 12,000 EGP while 13.8% of the participants obtained income above 12,000 EGP.

### **5.3 Testing the Research Hypotheses**

In this section, the given hypotheses will be answered using statistical techniques such as Regression Analysis where there are two models to be estimated; these models are testing the theoretical model with and without the presence of moderator variables.

#### **5.3.1 Testing Hypothesis (H1) to Hypothesis (H5)**

In the first five Hypotheses, there are four independent variables (Emotional Factors, Social Factors, Precautions Awareness, and Anxiety), and one dependent variable (Panic Buying Behavior).

The following tables illustrate that the variations in the explanatory variables explain about 67% of the variations in the panic buying behavior.

**Table (2): Model summary**

Model	R	R-Square	Adjusted R-Square	Std. Error
1	0.816	0.665	0.662	0.51959

The following table illustrates that the model is significant as the significance of the F-test is less the level of significance which equals 0.05.

**Table (3): ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	201.385	4	50.346	186.488	0.000
	Residuals	101.239	375	0.27		
	Total	302.623	379			

The following table shows the coefficients of the regression model; these coefficients illustrate with confident 95%:

Panic Buying Behavior will increase by 0.238 when the value of the Emotional Factors increases by one unit, holding other variables constant. Also, Panic Buying Behavior will increase by 0.445 when the value of the Social Factors increases by one unit, holding other variables constant. Moreover, Panic Buying Behavior will increase by 0.455 when the value of the precautions Awareness increases by one unit, holding other variables constant. On the other hand, Anxiety doesn't affect the Panic Buying Behavior, holding other variables constant.

**Table (4)** Summery for simple regression models

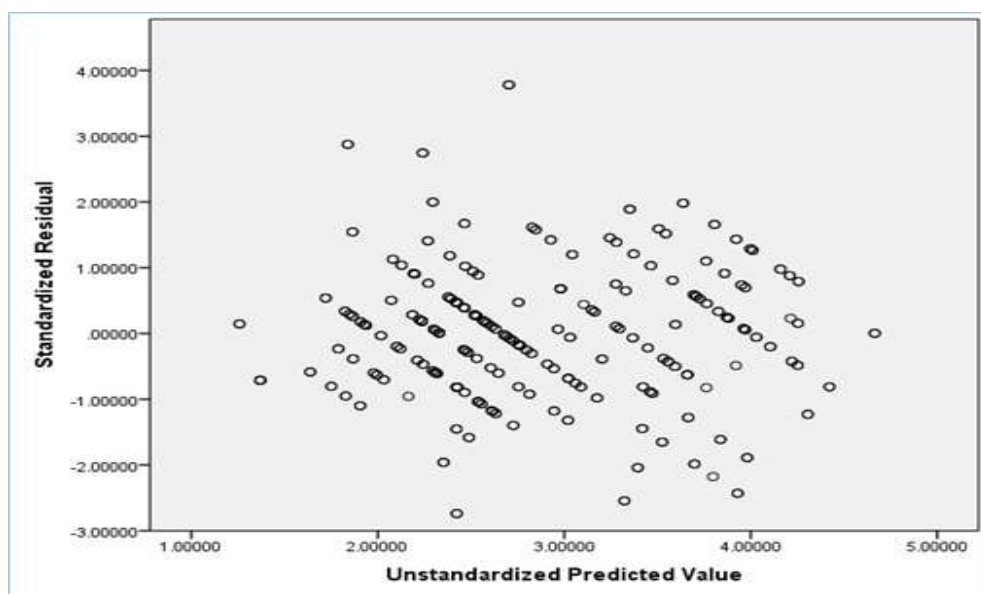
Dependent Variable: Panic buying behavior				
Independent Variable	R	R2	Adjusted R2 for each variable	standard error
social	0.756968	0.573	57.0%	0.467
Emotional factor	0.694262	0.482	48.0%	0.428
Awareness	0.301662	0.091	8.9%	0.516
Anxiety	0.225832	0.051	4.9%	0.498

From the above table, it is concluded that Emotional factors explain 48% of the variation in panic buying behavior and the Social factors explain 57% of the variation in panic buying behavior. Also, the Precautions Awareness variable explains 8.9% of the variation in panic buying behavior. While, Anxiety explain 4.9% of the variation in panic buying behavior.

**Table (5):** Variables coefficients

Model	Unstandardized Coefficient		Standardized Coefficient	T	Sig.	
	Beta	Std. Error	Beta			
1	Constant	-0.736	0.207	-	-3.556	0.000
	Emotional Factors	0.238	0.042	0.274	5.704	0.000
	Social Factors	0.445	0.04	0.534	11.17	0.000
	Awareness	0.455	0.054	0.296	8.431	0.000
	Anxiety	-0.057	0.03	-0.068	-1.913	0.056

The points on the following plot show no pattern or trend which indicates linearity of the estimated model.



**Figure (2): linearity plot**

### 5.3.2 Testing the Hypothesis (H6)

In H6, there are four independent variables (Emotional Factors, Social Factors, Awareness, and Anxiety), five moderator variables (Gender, Age, Educational Level, Marital Status, and Monthly Income), and one dependent variable (Panic Buying Behavior).

**Table (6): model summary**

Model	R-Square	Adjusted R-Square
1	0.703	0.679

The following table illustrates that the model is significant as the significance of the F-test is less the level of significance which equals 0.05.

**Table (7): ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	213.882	29	7.341	28.630	0.000
	Residuals	89.741	350	0.256		
	Total	302.623	379			

## 6. Conclusion

This paper aimed at examining how emotional, social factors, precautions awareness and anxiety levels affected panic buying behavior during the COVID 19 pandemic. In addition to the moderating effect of demographics (age, gender, income and education) on the relationship between the above-mentioned group of factors and the panic buying behavior among the Egyptian shoppers, it is a vital issue that has received insufficient attention in the literature: particularly, empirical evidence about the application of the suggested conceptual framework in Egypt context. This research can contribute to a deeper understanding of this topic as it is necessary to develop useful indications for hypermarkets about the importance of social, emotional factors, precautions awareness and anxiety levels that can affect shopping patterns.

Although there was insufficient research about the importance of the effect of panic buying behaviors in Egypt: particularly, empirical evidence about the application of the suggested conceptual framework in Egypt, this study developed a model constructed of six main variables, the independent variables are the emotional factors measured by (fear of missing out, worry, and regret), social factors measured by several dimensions such as (social media rumors – observational learning), precaution awareness level and anxiety level. The dependent variable is the panic buying behavior in addition to the moderator variable which is demographics (age – gender - income and education) the model of the study had been applied on a sample collected from the Egyptian hyper market shoppers. The results of the research indicated that the variations in the independent variables explain about 66% of the variations in panic buying behavior. While the variations in the independent variables explain about 68% of the variations in panic buying behavior in the presence of the moderator effect.

Moreover, the results revealed that Emotional factors and Social factors explain 48% and 57% of the variation in panic buying behavior respectively. While each of Precautions Awareness and Anxiety has much lower effect since they are responsible of 8.9% and 4.9% of the variation in panic buying behavior.



Likewise, the results of the research showed that panic buying behavior will increase by 0.238 when the value of the emotional factors increases by one unit, holding other variables constant. On the same side, the panic buying behavior will increase by 0.445 when the value of the social factors increases by one unit, holding other variables constant.

Concluding that Egyptian shoppers are affected by the social factors more than the emotional factors, the social media dimensions (social media rumors – observational learning) have a greater impact on panic buying behavior than the emotional factors dimensions (fear of missing out, worry, and regret).

Likewise, panic buying behavior will increase by 0.455 when the value of the precaution's awareness increases by one unit, holding other variables constant, while anxiety doesn't affect the panic buying behavior and holding other variables constant.

Regarding the moderator effect, the research results concluded that educational level doesn't moderate the relationship between panic buying behavior and each of emotional factors, social Factors, precautions awareness and anxiety. Otherwise, Gender moderates the relationship between panic buying behavior and the social factors where this effect for males is greater than the same effect for females by 0.225, holding other variables constant. Furthermore, Gender doesn't

moderate the relationship between panic buying behavior and emotional factors, precautions awareness and anxiety.

In addition, it is concluded that Age doesn't moderate the relationship between panic buying behavior and each of emotional factors, social factors and precautions awareness. While it moderates the relationship between panic buying behavior and anxiety level such that the effect of anxiety for those aged more than 34 years old is greater than the same effect for those aged less than 34 years old by 0.213, holding other variables constant.

## **7. Limitations and Suggestions for Future Research**

A few constraints and limitations in this study can be settled and resolved in future research. The study was completed with restricted time and capacities. Time limitations of the study affected the results.

In addition, this study results are limited by COVID-19 pandemic, sample size. Other demographic factors such as living arrangements were not included in this study. However, future studies should focus on these limitations. In the future, the topic of the research and its results might have changed due to the pandemic ended decisions, However, if applied during different type of crisis the results are expected to be different.

Moreover, future studies engaging in cross-cultural comparisons to enhance the understanding of the research implications is recommended.

### **Ethical considerations**

The authors have adhered strictly to all applicable ethical standards (no plagiarising, no lack of informed consent, no misconduct, no data fabrication or falsification, no redundant or double publication, etc.).

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### **Data availability statement**

Upon inquiry, information will be provided.

### **Declaration of interest statement**

The authors declare no conflict of interest.

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