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Amman - Jordan

Consumers Attitudes toward Using Direct-To-Consumer Advertising Tools for Prescription Drugs and Their Impact on Consumers Awareness Amman - Jordan

اتجاهات المستهلكين نحو استخدام أدوات الإعلان المباشر للمستهلك للأدوية الموصوفة وأثرها على وعي المستهلكين عمان – الأردن

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Authorization

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Consumers Attitudes toward Using Direct-To-Consumer Advertising Tools for Prescription Drugs and their Impact on Consumers Awareness

It was accepted on: 14th, May, 2019

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Rawand Sami Al-Oqaili.

Dedication

To a person who left my life, but his soul and his love remained companions my ways ... My uncle Yassen Al-Oqaili, may God have mercy on him, to my destiny in the care and perseverance ... Dear father Sami Al-Oqaili, to whom I taught me tender and love… my dear mother, I draw on my strength ... Sadia al-Kashif, to the habitat and constant support for me.... My dear husband Loay Al-Oqaili, to a piece of my heart and the source of my happiness.... Dear my daughter Naya,

To my brothers and sisters ... my family and my husband's family ... for their continuous support and encouragement to me.... to my friends, friends for ever , especially Ola Salah & Maram Diab, to the employers for their continuous support and confidence in my abilities and encouragement…. (Al-Taqqadom Pharmaceutical Industries) TQ-Pharma Company, to the University of Excellence and which I am proud of ... Middle East University, to the Doctor of the Almighty, the creative man who gives without tirelessness or boredom, the father who supports the guide ... Dr. Amjad Twaiqat.

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إلى شخص غادر حياتي لكن بقيت روحه وحبه رفيقان لدربي .... عمي ياسين العقيلي رحمه الله، إلى قدوتي في الجد والمثابرة .... أبي العزيز سامي العقيلي، إلى من علمتني العطاء والحب أمي العزيزة ريم قرالة، إلى أمي الثانية التي أستمد منها قوتي ... سعدية الكاشف، إلى موطني والداعم الدائم لي .... زوجي العزيز لؤي العقيلي، إلى قطعة من قلبي ومصدر سعادتي .... عزيزتي ابنتي نايا.

إلى إخواني وأخواتي ... عائلتي وعائلة زوجي... على دعمهم وتشجيعهم المستمر لي .... إلى صديقاتي رفيقات دربي بالأخص علا صلاح ومرام دياب، إلى أصحاب العمل لما قدموه لي من دعم مستمر وثقتهم في قدراتي وتشجيعي... شركة التقدم للصناعات الدوائية، إلى جامعتي المميزة والتي أنا فخورة بها ... جامعة الشرق الأوسط، إلى دكتوري القدير الانسان الخلاق المعطي بدون كلل أو ملل الأب الداعم الموجه ... الدكتور أمجد طويقات.

روند سامي العقيلي

Table of Contents

Subject	Page
Title ……...	I
Authorization ……	II
Discussion Committee Decision …….	III
Acknowledgement …….	IV
Dedication …….	V
Table of Contents ……..	VI
List of Tables …….	VIII
List of Figures ……...	IX
English Abstract ……	X
Arabic Abstract …….	XI
Chapter One: Background of the Study	
Introduction ……...	2
Study Problem ……..	4
Study Objectives ……	4
Study Significance …….	4
Study Questions …….	5
Hypothesis …….	5
Study Model ……..	6
Study Limitations ……..	7
Study Terminologies …….	7
Chapter Two: Theoretical Framework and Previous Studies	
Theoretical Framework …….	11
Previous Studies ……	19
Chapter Three: Methods and procedures	
Introduction ……...	24
Methodology of the Study …….	24

Population and Sample of the Study ……. 24
Descriptive Analysis of the Demographic Variables ……... 25
Tools and Data Collection …… 25
Statistical Treatment …….. 26
Validity and Reliability ……. 27
Chapter Four: Analysis of the Results & Hypotheses Testing
Introduction ……... 37
Descriptive Analysis of Study Variables …….. 37
Analysis Adequacy of the Data to Test the Study Hypotheses ……. 37
Hypotheses Testing ……... 43
Chapter Five: Results, Conclusions and Recommendations
The Main Result of Study ……. 50
Conclusion …… 50
Recommendations ……. 52
References ……. 54
Appendixes …… 60

List of Table

Table no.	Table Name	Page no.
3.1	Bartlett's and KMO for Attitudes toward Broadcast State	29
3.2	Bartlett's and KMO for Attitudes toward Using Printed	30
3.3	Bartlett's and KMO for Attitudes toward Using Social Media	31
3.4	Bartlett's and KMO for Consumer Awareness	32
3.5	Normality	33
3.6	Reliability	33
3.7	Respondents Gender	34
3.8	Respondents Age	34
3.9	Respondents Scientific qualification	35
4.1	Mean, Standard Deviation, t-Value, Ranking and Importance Of Using Direct-To-Consumer Advertising Tools	38
4.2	Mean, Standard Deviation, t-Value, Ranking and Importance of Attitudes toward Broadcast	38
4.3	Mean, Standard Deviation, t-Value, Ranking and Importance of Attitudes toward Using Printed	40
4.4	Mean, Standard Deviation, t-Value, Ranking and Importance of Attitudes toward using social media	41
4.5	Mean, Standard Deviation, t-Value, Ranking and Importance of Consumer Awareness	42
4.6	Bivariate Pearson Principles Method Test for Relationships between Variables	43
4.7	Multicollinearity, Skewness and Durbin-Watson Tests	43
4.8	ANOVA Test Regressing for consumer' attitudes toward Using Direct-ToConsumer Advertising Tools Together against consumer Awareness	46
4.9	ANOVA Test - Regression the Three consumer' attitudes toward Using Direct-To-Consumer Advertising Tools Sub-Variable Together against Development of consumer Awareness	47

List of Figures

Model no.	Model Name	Page
1	Research Model	**6**

Consumers Attitudes toward Using Direct-To-Consumer Advertising Tools for Prescription Drugs and their Impact on Consumers Awareness. Amman - Jordan

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Abstract

Purpose: The purpose of the current study is to investigate the Consumers Attitudes toward Using Direct-To-Consumer Advertising Tools for Prescription Drugs and their Impact on Consumers Awareness

Design/methodology/approach: This study considered as a descriptive analytical, study as well as, cause/effect study. The data collected from 412 patients who have Diabetes, in Amman, Jordan. After confirming normality, validity and reliability of the tool, the descriptive analysis used to describe the responses, then correlation between variables was carried out, and finally multiple regressions used to test the hypothesis.

Findings: The result of the study shows that the respondents agree on medium implementation of Attitudes toward Broadcast sub-variables. Moreover, result shows that the respondents agree on medium implementation of Attitudes toward Using Printed, Result also shows that the respondents agree on medium to high implementation of Attitudes toward social media, Result also shows the relationship between Consumers Attitudes toward Using Direct-To-Consumer Advertising Tools and consumer Awareness is very strong. Finally, the regression of the three independent variables of consumers' attitudes toward Using Direct-To-Consumer Advertising Tools impact of dependent variable consumer Awareness, Since R^2 is 42.5% then the consumers' attitudes toward Using Direct-To-Consumer Advertising Tools can explain 42.5% of variance on consumer Awareness variable.

Keywords: Using Direct-To-Consumer Advertising Tools, Consumers Awareness.

إتجاهات المستهلكين نحو استخدام أدوات الإعلان المباشر للمستهلك للأدوية الموصوفة وأثرها على وعي المستهلكين. عمان – الأردن

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أمجد الطويقات

الملخص

هدفت هذه الدراسة إلى التعرف على اتجاهات المستهلكين نحو استخدام أدوات الإعلان المباشر للمستهلك للأدوية الموصوفة وأثرها على وعي المستهلكين.

التصميم / المنهجية / المنهج: تعتبر هذه الدراسة دراسة تحليلية وصفية وكذلك دراسة السبب / الأثر. البيانات التي تم جمعها من 412 مريضا يعانون من مرض السكري، في عمان، الأردن. بعد التأكد من الحالة الطبيعية وصلاحية وموثوقية الأداة، تم استخدام التحليل الوصفي لوصف الإجابات، ثم تم تنفيذ الارتباط بين المتغيرات، وأخيرا تم استخدام انحدارات متعددة لاختبار الفرضية.

وتوصلت الدراسة الى عدة نتائج أهمها: أظهرت النتائج ان متوسط اجابات العينة فيما يخص اتجاهات المرضى نحو ادوات البث قد كانت متوسطة وذلك الامر فقد بينت النتائج بأن متوسط الاجابات لنفس العينة فيما يخص اتجاهات المرضى نحو اداة المطبوعات قد كانت متوسطة ايضا، اما فيما يخص اتجاهات المرضى نحو ادوات التواصل الاجتماعي فقد اظهرت نتائج البحث الوصفي فيما يخص ذلك قد كانت متوسط، واخيراً أظهرت النتائج وجود علاقة ارتباطية ما بين متغير الدراسة المستقل وهو اتجاهات المستهلكين نحو استخدام أدوات الإعلان المباشر والمتغير التابع وهو وعي المستهلكين، حيث أظهرت نتائج تحليل الفرضيات بأن أدوات الاعلان المباشر المستخدمة بمتغيراتها الفرعية تؤثر على وعي المستهلكين حيث ان قيمة R^2 قد كانت 0.425 وهنا يمكن تفسير التغير الحاصل للمتغير التابع كان مساويا ل 42.5% نتيجة للتغير الحاصل على المتغير المستقل.

الكلمات المفتاحية: اتجاهات المستهلكين نحو استخدام أدوات الإعلان المباشر، وعي المستهلكين.

Chapter One

General Framework

1.1 Introduction.

1.2 Study Objectives.

1.3 Study Importance.

1.4 Problem Statement.

1.5 Study Hypotheses.

1.6 Study Model.

1.7 Study Limitations.

1.8 Operational Definitions.

Chapter One: Background of The Study

1.1 Introduction:

The world has become so open to the point where while you are sitting in the comfort of your home, targeted and specially tailored to your likings and needs advertisements reach you; Making it impossible for you but to be attentive to this marking method, especially with the easy access to information a simple hint or a floating piece of information about a disease or innovative cure could bring you to fire your preferred search engine and search for one of the pharmaceutical companies among the humongous widely spread new companies and dive into their list of products even though if you are not a healthcare professional, which rendered health authorities like the Jordanian Food and Drugs Administration (JFDA) work with flow and create a designated department for Over the Counter (OTC) pharmaceutical advertisement to control this massive newly created business.

For decades, Direct-To-Consumer Advertising (DTCA) was for Over the Counter (OTC) Drugs only, and then two countries promote Direct-To-Consumer Advertising for prescription drugs; USA and New Zealand, referring to DTCA benefits; consumer become more informed, as well as awareness. In Jordan, Direct-To-Consumer Advertising (DTCA) is not applicable for the prescribed drugs, it's applicable for Over the Counter (OTC) only, with appearance of new diseases, generics drugs, as well as educated patients, and the need for DTCA is increased, because the patients need more details regarding risk-benefit regarding the used drugs (Mutha, 2013).

In 1997, U.S FDA allows DTCA through T.V, Niederdeppe, et al. (2016) said that American patients become highly informed with health related information because applied DTCA system. Mackeyet al., (2015) stated that DTCA can be through television, radio, newspaper, and Internet.

Yang,et al., (2018) found that 69% of the consumers agreed with DTCA but with pre-approval for the advertising materials from Korea government.Park (2014) stated that DTCA support and encourage patients to continue their knowledge with their doctors.

As any advertising, Hwang, and Young (2017) discussed that DTCA benefit refers to understanding advertising information.Siddigi and Shah(2017) said that DTCA should be refer to the awareness of patients and physicians have appositive attitude regarding DTCA.

Levinsohn and Patrin (2013) discussed that we can measure the consumers awareness through demand side changing. Mukherji (2014) said that Simplifying FDA rules increase the awareness and we can increase the awareness through establishing education programs, Cuijpers (2002). Heo. (2013) found that age has a high effect on awareness. Mutha (2013) discussed that small percent of consumers is aware regarding herbal drugs.

Based on the mentioned above introduction, this study aims to investigate consumer's attitudes toward Using Direct-To-Consumer Advertising tools for Prescription Drugs and their impacton Consumers Awareness; from Jordanian consumersView Point.

1.2 Study Objectives:

The purpose of the study is to investigate the impact of consumer'sattitudes toward used Direct-To-Consumer Advertising tools for Prescription Drugs and theirimpacton Consumers Awareness; from consumers View Point in Jordan.

1.3 Study Importance:

Scientific importance: it can be a base for other studies in the future.

Practical importance: The current study may be considered as a study with few numbers of studies about this topic, on the Arab world, as the researcher's knowledge. The results may be appropriate to other countries to promote DTCA&the main importance of this study is to provide sound recommendations to decision maker, Authorities, physicians, and patients regarding the importance of DTCA.

1.4 Study Problem Statement:

The researcher notices that, increasing the educated consumers and their need for more information regarding their health state and the used drug is the motive task for promote DTCA to be used for achieving the required benefits from it. However government's regulations prevent advertising for general public, with times and provided future studies and all the time updating in regulations to be applicable with changeable dynamics environments globally this problem will be resolved.

The researcher is notice from her work field the need for DTCA as the people become more awareness, educated, and regarding the wide distributions of companies and generic drugs in Jordan. Also we haven't many specialist studies in Jordanas the researcher's knowledge

StudyQuestions:

The current study is dedicated to answer the following main question:

1. Is there an impact of consumer's attitudes toward Using Direct-To-Consumer advertising tools and their Awarenessin Amman - Jordan?

Based on Using Direct-To-Consumer Advertising Tools sub-variables the following three questions can be developed:

1.1 Is there an impact ofconsumer'sattitudes toward UsingBroadcast and their Awarenessin Amman - Jordan?

1.2 Is there an impact ofconsumer'sattitudes toward Using Printedand their Awarenessin Amman - Jordan?

1.3 Is there an impact ofconsumer'sattitudes toward Using social media and their Awarenessin Amman - Jordan?

1.5 Study Hypotheses:

The above questions answered through testing the following hypotheses:

H01: There is nostatistic significant impact of consumers' attitudes toward Using Direct-To-Consumer Advertising Tools their Awareness at ($\alpha \leq 0.05$)in Amman - Jordan.

Based on Using Direct-To-Consumer Advertising Tools sub-variables the following three hypotheses can be developed:

H01.1:There is nostatistic significant impact of consumer's attitudes toward Using Broadcast and their Awareness, at ($\alpha \leq 0.05$)in Amman - Jordan.

H01.2: There is nostatistic significantimpact of consumers' attitudes toward Using Printed and theirAwareness, at (α≤0.05)in Amman – Jordan.

H01.3: There is nostatistic significantimpact of consumer's attitudes toward Using social mediaand their Awareness, at (α≤0.05)in Amman - Jordan.

1.6 Study Model:

Based on problem statement and its questions the following model has been developed based on studies, to study the Impact of Consumers Attitudes toward Using Direct-To-Consumer Advertising tools for Prescription Drugs on Consumer Awareness, as shown in model (1).

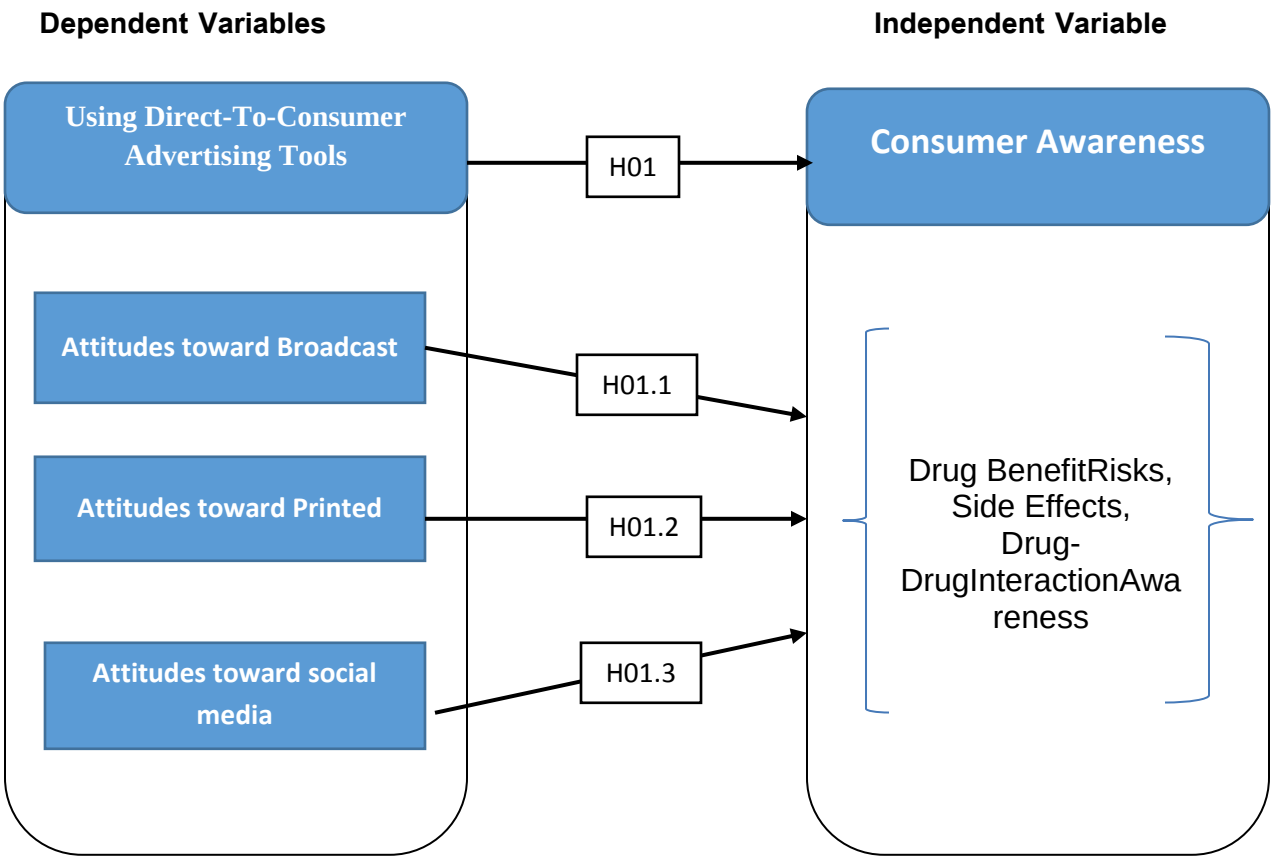

Figure 1: Research Model

This model was built based on previous studies as sources that took the Using Direct-To-Consumer Advertising, Consumer Awareness and related factors as building criteria. Previous studies (Wingate and Xie , 2013) , (Zadeh et. al., 2017) , (Hwang & Young, 2017)

1.7 Study Limitations:

Human Limitation: This study carried out on customers of specific disease (Diabetes Disease) in Amman, Jordan. And it is most prevalent in Jordan.

Place Limitation: Thestudy carried out in Amman, Jordan.

Time Limitation: This study be carried out during second semester ofthe academic year 2018-2019 (January, 2019 – April, 2019)

Other Limitations:

1. New project & not applicable in Jordan.
2. Lack of available accurate statistical data regarding the percentage of Diabetic patients.
3. Hardness difficult ways to collect data from Patients in the special center for Diabetes & Hospitals.

1.8 Operational Definitions:

Independent Variable & its Dimension:

- Direct-to-Consumer Drug Advertising**(DTCA) :** is a form of pharmaceutical marketing that directly advertises prescription drugs and targets the

consumer/patient – represented a new opportunity for industry marketing diversification and influencing prescription drug sales and utilization (Mackey & Liang, 2012 &Wang &Kesselheim, 2013).

- Direct-to-Consumer Drug Advertising: (DTCDA) is an effort (usually via popular media) made by a pharmaceutical company to promote its prescription products directly to patients. (Abel, et. Al., 2006)

The researcher definesDTCA: is typically defined as any promotional effort by pharmaceutical companies to present prescription drug information to the consumers through the media or any related party that include ads, magazines newspapers, brochures, and direct-mail.

- **Broadcast media:**is media provide you with advertising through Radio or Television. (Shimp , 2015)

As per researcher opinion, the most practical means to transmit information to the widest audience, as the primary source of both news and other recreational content (e.g., movies, sitcoms, etc.)

- **Printedmedia:** is printed medium for Advertising purposes. (Shimp , 2015)

Researcher defines Brochures are promotional documents, primarily used to introduce a company, organization, products or services and inform prospective customers or members of the public of the benefits.as per researcher opinion, it is a paper contain a message with expressive images for promoting products or

defining products, organizations, special market, …. Etc, Contains Magazine, Newspaper, and Brochures.

- **Social media**: using electronic media for advertising, selling personally and making relationships (Bruno & Dariusz, 2015)

  Researcher defines Social media: it forms of electronic communication (such as websites for social networking and micro blogging) through which users create online communities to share information, ideas, personal messages, and other content (such as videos).

Independent Variable:

- **Awareness:** is the ability to directly know and perceive, to feel, or to be cognizant of events. More broadly, it is the state of being conscious of something. Another definition describes it as a state wherein a subject is aware of some information when that information is directly available to bring to bear in the direction of a wide range of behavioral processes. (Kidd, 2016).

  Researcher defines Awareness that it is the ability to know, understand, and feel the state or the provided information.

- **Drug BenefitRisks awareness:**Researcher define Drug benefit Risk awareness awareness that it is Knowing what Drugs provide therapeutic benefits like curing a disease, slowing its evolution, or alleviating its symptoms, and drug risks, frequent and minor symptoms and rare risks.

- **Side Effects awareness:** Researcher define side effect awareness that it is Knowing what is the unwanted symptoms caused by Drugs.

- **Drug Drug Interactions awareness:** Researcher define Drug Drug Interactions awareness that it is Knowing what is the chance when the patient take two or more drugs that there will be an interaction among the drugs.

Chapter Two

Theoretical Framework and Previous Studies

2.1 Theoretical Framework

2.2 Previous Studies

Chapter Two: Theoretical Background and Literature Review

Introduction:

Theoretical Background

Introduction

Many researchers claimed that fostering trust in advertising isn't an easy task. It is a challenging goal to achieve since most consumers are inclined to distrust advertising more than other forms of product information through different tools. DTCA for drugs try to establish a base of trust through using different media, including print advertising (journals and brochures) and audio visual tools such as television (satellite), Internet and medical journal advertisements.even when the content of the message is the same. MacKenzie& Lutz (1989) considered trust as an essential element of consumer behavior and communication, but they considered advertising which focuses on credibility is more important than trust. One kind of trust is media which takes a sociological approach to conceptualizing trust, anchoring it in relation to social behaviors (Ulsaner, 2002). The role of trust in media (and, thereby, media news) is considered to be the role of trust in government and fellow citizens in which models usually include political trust, ideology, and partisanship and continue to evolve to present new explanatory variables. As a result, many pieces of research were able to provide useful insights for considering the role of trust in DTCA, there are a few key points of divergence that limit the degree of extrapolation. These studies differentiate trust as a psychological phenomenon which is tied to a more individualistic and behavioral outcome, as it is typically approached in

advertising scholarship, and in the research presented here. Some researchers such as: (Kohring&Matthes 2007 &Kourisis, 2001) stated the differences between media credibility, media trust as well as media skepticism relative to the role they play in attention to and consumption of news. They also highlight the apparent contradiction that Americans continue to consume news media despite faltering trust in the news. Soh, Reid & King (2007) add additional components such as the perceived benevolence of the source and an implicit readiness to act. The added that trust have been exhibited in advertising to increase consumers' processing and evaluation of, and response to, specific advertisements.

Direct consumer advertising (DTCA) for prescription drugs have become very profitable for the pharmaceutical industry,its importance in profit and sales is evident in many countries. In 1997, the USA permitted direct-to-consumer advertising (DTCA) for both over-the-counter (OTC) and prescription products, followed by New Zealand.

Canada allows the non-prescription drug (OTC) to be declared but prohibits DTCA from prescription drugs, despite the 1978 exemption, which was intended to allow for price comparison, and permits the advertisement of the name of the product, price and quantity.4 However, American magazines and US cable television, as well as increasing the locally generated DTCA from questionable legitimacy (Silversides, 2010). DTCA supporters argue that advertising empowers patients, while critics argue they encourage profanity in describing.(Kravitz, 2000).

The United States made huge profits, especially after the Food and Drug Administration (FDA) relaxed its pharmaceutical marketing guidelines in 1997, DTCA expenses rose to

$ 4.9 billion in 2007 and from 2007 to 2014, DTCA Pharmaceuticals Billions of dollars with annual expenditures of $ 3.5 to $ 4.5 billion.4 The DTCA expenditure analysis indicates that each dollar translates into $ 2.20 to $ 4.20 of increased pharmaceutical sales, which is considered one of the most widely used prescription drugs in the United States, Medicines are relatively safe and touch conditions very common objective to.(Ventola, 2011)

Gilbody, Wilson, and Watt (2005) show that direct to consumer advertising is associated with increased prescription of advertised products and there is large impact on patients' request for specific drugs and medical practitioner confidence in recommending. No additional benefits in terms of health outcomes were demonstrated.

Direct-To-Consumer-Advertising's growing earnings in the United States prompted both researchers and policy makers to scrutinize advertising practices and analyze their impact on public health. As a result, DTCA has been the subject of many excellent review articles. There have been many common arguments about the advantages and disadvantages of DTCA. DTCA advocates have confirmed that it promotes patient awareness and education by providing valid information about conditions and treatment options (Holmer, 2000). He has also argued that DTCA encourages the diagnosis and treatment of untreated cases by encouraging patients to seek more prescriptions (Liu& Gupta, 2011). In the meantime, DTCA opponents have confirmed that it provides inaccurate and biased information primarily to pharmaceutical companies, thus reinforcing the unnecessary description. (Davis, 2000)

The effect of the direct-to-consumer advertising (DTCA) for prescription drug in the pharmaceutical industry has a great statue because of its informational value. Despite the need of a consensus on the effects of DTCA to date, no one can deny its significant impact on the exponential surge of drug revenues.The dollar's spending on DTCA has been evident over the years, as mentioned before. (Calfee, 2002 &Lexchin and Mintzes, 2002) Furthermore, the success of DTCA increases with the widespread use of the Internet sent a wake-up call to the healthcare decision-makers and industry. Many academics, researchers and health care decision-makers and providers are divided into two groups. The first group supports and justifies, while the second group is against it. In one hand, DTCA can be an effective tool to increase patients' awareness of their therapeutic choice. DTCA appear to provide valuable information. It provides medical information, stimulate consumer interaction with healthcare providers, increase awareness improve treatment adherence. DTCA has the potential to improve patient education efforts, improve the efficiency of doctor-patient interactions, and be encouraging treatment compliance among patients(Calfee, 2002)

Direct-To-Consumer-Advertising advocates emphasize that it raises awareness about diseases, educates consumers, improves patient communication and compliance, and thus enhances the health of the public. For example, Zolnierek, et al. (2009) supports health benefits and price reductions if consumer advertising increases. In addition, they concluded that communication in medical care is closely linked to better consensus with patients. Conversely, opponents argue that DTCA tends to increase unrealistic expectations about drug benefits and thus increase consumer demand for medication, leading to an over-stretched medical community. A stream of research discusses the

advertising of prescription drugs to consumers but does not say whether patients generally accept them. For example, Zaltman and Vertinsky (1971) present one of the oldest models for the impact of an informational message on enhancing the health of individuals.

Direct-To-Consumer-Advertising has been criticized for leading to awrong description (initiated by patients, not prescriptions), excessive emphasis on benefits vs. risks in marketing claims, and overuse of prescription drugs and trademarks (Ventola, 2011). Because of these concerns, DTCA has been criticized and calls for borders have been investigated, but they have failed to gain momentum largely because of constitutional challenges in the United States to restrict forms of free trade expression (Ross &Kravitz, 2013).

New drugs presented in DTCA may have unknown side effects or safety issues. Opponents of DTCA argue that the primary motivation of the pharmaceutical industry is to increase profit rather than help individuals with health-related decisions (Sumpradit et al., 2004). The pharmaceutical industry spends billions of dollars a year on promoting consumers to buy advertised drugs and spending more on R & D promotion. This publicity has been abused to change the pattern of use of health care services, including normal medical conditions, excessive consumption of new jobs For example, in countries with a social health system, such as New Zealand, where the government subsidizes generic drugs, ads can persuade patients to apply for drugs that are not supported by a single subsidized generic brand. (Mintzes, 2002).

On the other hand, the Food and Drug Administration (FDA) has developed regulations and guidelines for controlling pharmaceutical advertising prescribed by pharmaceutical companies. A fair balance between benefits and risk information is an essential part of regulation, because the FDAcannot be able to make informed and informed assessments and decisions when presented with both sides of the information (Davis, 2007). At least the same scope, depth or detail where the inclusion information can be considered misleading. Although a balance between benefit and risk information is an important element of the FDA guidelines, consideration should also be given to how information is communicated to consumers. Although risk and risk information exists in the DTCA, it is presented differently. It is easy for consumers to read and understand their own opinion about interest information. On the other hand, risk information is usually presented in smaller font sizes that can be easily ignored and consist of long lists where important and clinically important information is difficult to identify 14 and often lacks key parts of information, Every harm effect (Huh &Cude, 2004). The format of risk information makes it difficult for consumers to understand it. Therefore, although consumer and risk information is presented in the advertisements, the as the FDA guidelines require the amount of interest and knowledge of the risks that consumers are able to understand and questionable Because of Differences in how to provide qualitative information. In addition, previous research indicates that the level of literacy required understanding the DTCA's main text (where most benefit information is) is at the secondary school reading level. (Macias et al., 2007).

Direct consumer advertising (DTCA) drugs derives its legitimacy from societies which base on institutional theory that focuses on the needs of an organization to survive

economically and establish legitimacy within its environment (Ruef and Scott 1998). Organizations get legitimacy and support by asserting their structures and procedures to widely-accepted cultural models or rules (Meyer and Rowan, 1977 and Ruef and Scott 1998).

Regarding to FDA There are many Types of Direct-to-Consumer Drug Advertisements and FDA Regulatory Requirements, first type: product claim ad that include Names a drug and the indication(s); makes claims regarding safety and efficacy. Second type Reminder ad including Names a drug, dosage form, and possibly cost, but not its uses, last type, and Help-seeking ad: Describes a disease or condition but doesn't mention a specific drug that treats it (Ventola, 2011)

Assam et. al. (2017) claimed thatthe Act recognizes following six consumer rights, first, the right to be protected against marketing of goods which are hazardous to life and property, second rights is to be informed about the quality, quantity, potency, purity, standard and price of goods to protect the consumer against unfair trade practices, third to be assured, wherever possible, access to a variety of goods at competitive prices, The fourth right is to be heard and to be assured that consumers' interests will receive due consideration at appropriate forums, fifth The right to seek redressed against unfair trade practices or unscrupulous exploitation of consumers and finally, the right to consumer education.

Many studies show that consumers' awareness imposessignificant impact on various types of effective consumers' behaviors (McEachern &Warnaby 2008). For example, Hartlieb and Jones (2009) emphasize the importance of ethical labeling for humanizing

business images. The function of ethical labeling is to saliently develop the ethical qualities into product features so that consumers become aware and have awareness on the critical aspect which is expected to influence consumers' decisions or behaviors.

Consumer awareness refers to the combination of the following (Kotlar, 2016):

- The knowledge of the product purchased by the consumers in terms of its quality, For example the consumer should know whether the product is good for health or not, whether the product is free of creating any environmental hazard or not etc.
- The education about the various types of hazards and problems associated with marketing of a product - For example, one way of marketing a product isadvertisement through newspapers, television etc. Consumers should haveproper education about the bad effects of advertisement. They must also verify thecontents of the advertisement.
- The knowledge about 'Consumer Rights' - This means that, first, the consumermust know that he/she has the right to get the right kind of product. Secondly, ifthe product is found out to be faulty in some manner, the consumer should haveknowledge of claiming compensation as per the law of the land.
- The knowledge about consumer's own responsibilities- This implies that consumersshould not indulge in wasteful and unnecessary consumption.

Consumer awareness it is important for consumers to protect themselves from the unfair trade practices of the trader's practices. Hence there is also need for consumer awareness to educate the consumer about their responsibilities.

The objective of consumer awareness as (Assam et. al, 2017) It seeks information about consumer awareness regarding different products, It gets information about demerits or defects of products from consumers and suggests remedial measures also It makes popular the positive points of the products finally It prepares wide market for the product.

Previous Studies:

Spake and Joseph(2007) study titled '**Consumer opinion and effectiveness of direct-to-consumer advertising** ' aimed to study DTCA effects on consumer choices for specific drugs from consumer view point, the study based on focus group exploratory research, the sample was 154 pharmacy consumer. The conclusion from these study show not sufficient information can achieved by the DTCA;also, few opinions were find it's effective and can provide them with the required information.

Sharabati et. al,(2013) Study titled ' **Relationship between direct-to consumer advertising and consumers'** decision-making' aimed to studying the impact of DTCA on consumers decisions. Data collected from 484 consumer surveyed by a questionnaire. The conclusion was that we have a positive effect for DTCA on awareness and consumer's decision making.

Wingate and Xie (2013) Study titled '**The influence of the number of presented symptoms in product-claim direct-to-consumer advertising on behavioral intentions**', the purpose of the study is to find the relationship between the quantity of

DTCA information and the attitude of consumer to ask his/herdoctors regarding the advertised antidepressant drug. The sample was from northeast US, 95 participants. The finding was that DTCA with more information regarding symptoms has high effect on consumers' choices and making many questions for their doctors.

Mukherjee et. al., (2013) study titled **'A review of research on direct-to-consumer advertising of prescription drugs: Directions for future research'** aimed to review DTCA articles from 1997 to 2012, the study was contained structured review of 130 published studies. They prove that DTCA has impact on the attitudes, awareness, and memory.

Lee et al.,(2015)Study titled **'Factors Influencing Consumers' Attitudinal and Behavioral Responses to Direct-To-Consumer and Over the-Counter Drug Advertising'**, a literature reviews model to find the differ in consumer attitudes regarding DTCA and OTCA. The result that DTCA has a response refers to the health status, involvement with drugs, health consciousness, drug use, income, and age.

Ball et. al., (2016) Study titled **'Causes and consequences of trust in direct-toconsumer prescription drug advertising'.** The result was that findings suggest trust plays a complex role in shaping consumer reactions to prescription drug ads.

Zadeh et. al., (2017) study titled **'‘At-risk’ individuals’ responses to direct to consumer advertising of prescription drugs: a nationally representative cross-sectional study'.** The Objective of the study to determine the factors play role in individuals’ self-reportedbehavioral responses to direct to consumer advertising.

cross-sectional survey On living adults(2057 Participants) in New Zealand. The findings that ‘at-risk’ (ie, with poorer self-reported health status, older, less educated, lower income and ethnic minorities), may be more vulnerable to drug advertising and we need a guidelines to ensure ethical advertisements.

Hwang & Young,(2017)study titled **is ' Enhancing the educational value of direct-to-consumer advertising of prescription drugs'.** The study discussed benefit and risk information for consumers. An experimental design was used for an antidepressant medication on 120 participants, ten true-false and 10 multiple-choice questions. The Conclusion of the Study that the health literacy techniques used to modify then advertisement were successful in enhancing consumers' comprehension and retention of information of DTCA.

Siddiqi and Shah (2017)Study titled '**Physicians’ attitude towards direct to consumer advertising of prescription drugs'** aimed to study the effect of physicians’ attitude towards DTCA and patients' request of additional information on specific advertised brand or the issuance of prescription generation. Samples were 250 doctors from hospitals of Rawalpindi/ Islamabad. The result was that physicians have positive attitude towards DTCA and providing patients with all required information, and company advertising should be regarding awareness not brand.

Yang,(2018)study titled ‘A **survey of perceptions and attitudes about direct-to-consumer advertising of prescription drugs among college students in South Korea'.**

The aim of the study to find out the attribute of students in South Korea regarding DTCA.cross-sectional survey was distributed for 1040. The study finding that DTCA should get preapproval from authorities in beginning then advertised.

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Chapter Three

Methods and procedures.

3.1 Introduction.

3.2 Methodology of the Study.

3.3 Population and Sample of the Study.

3.4Study Tools and Data Collection.

3.5Statistical Treatment.

3.6 Data Analysis Methods

3.7 Demographic Characteristics Analysis.

Chapter Three: Study Methodology (Methods and Procedures)

3.1 Introduction:

In this chapter, the researcher is going to explain in detail the methodology used in the study, and the study population and sample. Then, the researcher will describe the study model, the study tools and the way of data collection. Next, the researcher will talk about the statistical treatment that used in the analysis of the collected data. Finally, the validation of the questionnaire and the reliability analysis is applied.

3.2 Methodology of the Study:

The current study is considered as descriptive the attitude for cause/effect study. It aims to study the effect of consumer's attitudes toward usingDTCA tools on the consumer's awareness at Amman -Jordan drugs consumers. This study begins with literature review, expert's interviews to develop a questionnaire, which used to collect the data.The collected data checked and coded on SPSS. Then normality, validity and reliability will be tested and the correlation between variables will be checked and finally, multipleregressions used to test the hypothesis.

3.3 Study Population, Sample and Unit of Analysis:

Population and Sample: the population of the study all the consumers, who have Diabetes Disease in Amman, Jordan. The sample selected randomly from many hospitals, because that was so difficult to collect it from National Center for Diabetes Endocrine

&Genetics, so the research refer to approved Tables as the sample more than 1 million persons so the sample should be more than 385 units.

Unit of Analysis: The survey unit of analysis is the patients who have Diabetes, in Amman, Jordan.

3.5: Study tools and Data Collection:

For this study, data that will be collected from two sources: secondary and primary data. Secondary data will be collected books, researches, articles, dissertations, thesis, working papers, journals, and Internet. Primary data collected though a questionnaire, which developed based on previous literature and expert.

The Questionnaire:

The questionnaire was developed based on hypothesis and research model, which include three sections.

Study Variables:

The questionnaire including three sections as follows:

Demographic Variables: include(Gender, Age, and Scientific qualification)

Dependent Variables: include (Attitudes toward using DTCA tools):Which includes the following sub-variables: Broadcast, Printed, Social media.

Independent Variable (Consumer Awareness):includes the following sub-variables: Drug Benefit Risks, Side Effects, and Drug-Drug Interaction Awareness.

All sub-variables and dimensions will be measured by suitable questions rated by five Likert scale, ranging from value 1(strongly disagree) to value 5 (strongly agree) used all over the questionnaire.

The scale is as follow:

Strongly Disagree	Disagree	Natural	Agree	Strongly Agree
1	**2**	**3**	**4**	**5**

3.5 Statistic Treatment:

The data collected from the responses of the study questionnaire was used through Statistical Package for Social Sciences (SPSS), the researcher used the following suitable statistical methods that consist of:

- _ *Percentage and Frequency*.
- *Cronbach Alpha reliability* (α) to measure strength of the correlation and coherence between questionnaire items.
- *Arithmetic* to identify the level of response of study sample individuals to the study variables.
- *Standard Deviation*: to measure the responses spacing degree about Arithmetic Mean.
- Variance Inflation Factor and Tolerance to make sure that there are no Multicollinearity between independent variables.
- *Multiple and Simple Regression analysis* to measure the impact of study variables on testing the direct effects.

$$\text{Class Interval} = \frac{\text{Maximum Class} - \text{Minimum Class}}{\text{Number of Level}}$$

$$\text{Class Interval} = \frac{5-1}{3} = \frac{4}{3} = 1.33$$

The Low degree from 1- less than 2.33

The Medium degree from 2.33 – 3.66

The High degree from 3.67 and above.

3.6Data Analysis Methods:

Data Analysis Methods:

To fulfill the purpose of this study all Diabetes from National Center for Diabetes Endocrine &Genetics in Amman was targeted and covered, The data collected from the patients who are treatment at National Center for Diabetes Endocrine &Genetics in Amman, Five Hundred questionnaires were distributed and 412 questionnaires returned back, after checking them, all were suitable for further analysis. Then they were coded against SPSS 20 and following analysis were carried out.

Validity Test: the current study used three methods to confirm the measurements validity, content, face and construct validity. Content validity was confirmed by collecting information from different sources such as books, journals, articles and working papers. While, face validity was confirmed through experts' interview and panel of judges. Finally, exploratory factor analysis was performed to check the construct validity.

Construct Validity (Factor Analysis):

Factor Analysis was used to investigate construct validity, if factor loading for each item within its group is more than 50% then construct validity assumed (Hairr, et. al.2014). While, Kaiser-Meyer-Olkin (KMO) is used to measure sampling adequacy, if KMO between 0.8 and 1 it indicates high adequacy, and if more than 70% it is accepted. Bartlett's Test of Sphericity of samples used as the indicator for sample items harmony, and should be less than 5% if the used confidence is 95%. Finally, variance shows explanatory power of each factor (Bischoff and Liebenberg, 2016).

Using Direct-To-Consumer Advertising Tools

1. Attitudes toward Broadcast Statements

Table (3-1) shows factor loading of each statement within Attitudes toward Broadcast Statements group rated more than 40%, therefore the construct validity was assumed. KMO has rated (82.3%) and the test produced the explanatory value of (74.21)which explains(74.21%) of the variance.

Table (3-1): Bartlett's and KMO for Attitudes toward Broadcast Statements

#	Statements	F1	KMO	Chi^2	% Var	Sig.
1	I believe that the use of direct advertising on television and radio will provide accurate information about the prescribed drugs.	**0.785**	**82.32**	**711.25**	**74.21**	**0.000**
2	I can trust the direct advertisement through television and radio for prescription drugs.	**0.775**				
3	I expect direct TV and radio advertising on prescribed drugs increases curiosity to know more about them.	**0.842**				
4	I believe that direct advertising through television and radio on prescription drugs will be monitored by the competent health authorities.	**0.901**				
5	Direct advertising through TV and radio can change the prescription drugs in my healthy lifestyle.	**0.846**				

2. Attitudes toward Using Printed

Table (3-2) shows factor loading of each statement within Attitudes toward Using Printed group rated more than 40%, therefore the construct validity was assumed. KMO has rated (85.6%) and the test produced the explanatory value of (81.40)which explains(81.4%) of the variance.

Table (3-2): Bartlett's and KMO for Attitudes toward Using Printed

#	Statements	F1	KMO	Chi^2	% Var	Sig.
1	I believe that the use of direct advertising through Magazine, Newspapers, & Brochure will provide accurate information about the prescribed drugs.	**0.884**	**85.6**	**709.65**	**81.4**	**0.000**
2	I can trust the direct advertisement through Magazine, Newspapers, & Brochure for prescription drugs.	**0.823**				
3	I expect direct advertising through Magazine, Newspapers, & Brochure on prescribed drugs increases curiosity to know more about them.	**0.769**				
4	I believe that direct advertising through Magazine, Newspapers, & Brochure on prescription drugs will be monitored by the competent health authorities.	**0.874**				
5	Direct advertising through Magazine, Newspapers, & Brochure can change the prescription drugs in my healthy lifestyle.	**0.921**				

3. Attitudes toward Using Social Media

Table (3-3) shows factor loading of each statement within Attitudes toward Using Social Media group rated more than 40%, therefore the construct validity was assumed. KMO has rated (84.52%) and the test produced the explanatory value of (80.02)which explains(80.02%) of the variance.

Table (3-3): Bartlett's and KMO for Attitudes toward Using Social Media

#	Statements	F1	KMO	Chi^2	% Var	Sig.
1	I believe that the use of direct advertising through Social Media will provide accurate information about the prescribed drugs.	**0.774**	**84.52**	**814.251**	**80.02**	**0.000**
2	I can trust the direct advertisement through Social Media for prescription drugs.	**0.712**				
3	I expect direct advertising through Social Media on prescribed drugs increases curiosity to know more about them.	**0.804**				
4	I believe that direct advertising through Social Media on prescription drugs will be monitored by the competent health authorities.	**0.912**				
5	Direct advertising through Social Media can change the prescription drugs in my healthy lifestyle.	**0.718**				

Consumer Awareness

Table (3-4) shows factor loading of each statement within Attitudes toward Using Social Media group rated more than 40%, therefore the construct validity was assumed. KMO has rated (81.15%) and the test produced the explanatory value of (79.12)which explains(79.12%) of the variance.

Table (3-4): Bartlett's and KMO for Consumer Awareness

#	Statements	F1	KMO	Chi^2	% Var	Sig.
1	I am aware of my health problems.	**0.715**	**81.15**	**746.312**	**79.12**	**0.000**
2	I encourage the doctor to visit regularly.	**0.806**				
3	I understand the reasons for my use of prescribed drugs.	**0.818**				
4	I am aware of the side effects of prescribed drugs.	**0.918**				
5	I am aware of the interactions between the foods and drugs prescribed to me.	**0.779**				
6	I know the effects of drug interactions on drugs prescribed to me.	**0.841**				
7	I realize the risks of prescription drugs.	**0.771**				
8	Understand the methods of using prescribed drugs.	**0.785**				
9	Understand health measures to prevent and avoid diseases.	**0.912**				
10	I understand what to do to change my healthy lifestyle.	**0.831**				

Normality Test: One-Sample Kolmogorov-Smirnov Test used to test normality of variables and sub-variables. The significance of all variables and sub-variables were more than 5%, which indicate that normality were assumed

Table (3-5): Normality

No.	Sub-Variable	No. of items	(K-S)Z	Sig.
1	Attitudes toward Broadcast	**5**	**0.847**	**0.425**
2	Attitudes toward Using Printed	**5**	**0.784**	**0.597**
3	Attitudes toward Using social media	**5**	**0.719**	**0.648**
Using Direct-To-Consumer Advertising Tools		**15**	**0.547**	**0.842**
Consumer Awareness		**10**	**0.741**	**0.712**

Reliability Test: the current study used Cronbch's Alpha coefficients of internal consistency to test the consistency and suitability of the measures. Table (3-6) shows that Cronbach's alpha for the study variables ranges between 0.742 and 0.857, if Cronbch's Alpha coefficients are more than 70%, then reliability is not violated.

Table (3-6): Reliability

No.	Sub-Variable	No. of items	Cronbach's Alpha
1	Attitudes toward Broadcast	**5**	**0.811**
2	Attitudes toward Using Printed	**5**	**0.742**
3	Attitudes toward Using social media	**5**	**0.857**
Using Direct-To-Consumer Advertising Tools		**15**	**0.774**
Consumer Awareness		**10**	**0.843**

3.5 Demographic Characteristics Analysis:

The study sample consisted of (412) patient; the following tables show the demographic characteristics of the sample, which includes gender, age, and educational degree.

Gender: table (3-7) shows that femalepatients rate (233)57%, and the males were (179)43% only.

Table (3-7): Respondents Gender

Variables	Categorization	Frequency	Percent %
Gender	**Male**	**179**	**43%**
	Female	**233**	**57%**
Total		**412**	**100%**

Age level: table (3-8) shows that patients are 36 to 45 years old (172) 42%, and the 46 and over were (170) 41% only..

Table (3-8): Respondents Age

Variables	Categorization	Frequency	Percent %
Age	**19 to 25 years**	**37**	**9%**
	26 to 35 years	**33**	**8%**
	36 to 45 years	**172**	**42%**
	46 and over	**170**	**41%**
Total		**412**	**100%**

Scientific qualification: table (3-9) shows that most of Patients are Bachelor holder (291) 71%, and the Diploma were (54) 13% only, which means that mostpatients are Bachelor holder.

Table (3-9): Respondents Scientific qualification

Variables	Categorization	Frequency	Percent %
Scientific qualification	Bachelor	291	71%
	Diploma	54	13%
	Master	16	4%
	Below that	49	12%
Total		412	100%

Chapter Four

Data Analysis

4.1 Introduction

4.2 Descriptive Statistical Analysis

4.3 Relationships between Variables

4.4 Hypothesis Analysis

4.1 Introduction:

This chapter divides three sections, descriptive statistical analysis, relationships between dependent and independent variables and the effect analysis for Consumers Attitudes toward Using Direct-To-Consumer Advertising Tools for Prescription Drugs and their Impact on Consumers Awareness.

4.2 Descriptive Statistical Analysis:

Descriptive statistical analyses compromise the means, standard deviations, t-values, ranking and importance of each variable and item.

4.2.1 Independent Variable (Using Direct-To-Consumer Advertising Tools):

Table(4-1) show that the means of Using Direct-To-Consumer Advertising Tools sub variables were range between(3.272 to 3.450) with standard deviation ranges from (1.03-1.26). This result indicate that the participant agree on medium important of Using Direct-To-Consumer Advertising Tools sub-variables. The average means of the Using Direct-To-Consumer Advertising Tools is (3.341) this means that the participants believe that the researched patients have medium important of using Direct-To-Consumer Advertising Tools. However, t-value indicates that all of Using Direct-To-Consumer Advertising Tools variable is medium important.

Table (4-1): Mean, Standard Deviation, t-Value, Ranking and Importance Of Using Direct-To-Consumer Advertising Tools

No.	Sub-Variable	Mean	S. D.	t-Value	Sig.	Ranking	Important
1	Attitudes toward Broadcast	**3.301**	**1.26**	**9.12**	**0.00**	**2**	**Medium**
2	Attitudes toward Using Printed	**3.272**	**1.17**	**12.31**	**0.00**	**3**	**Medium**
3	Attitudes toward Using social media	**3.450**	**1.03**	**7.45**	**0.00**	**1**	**Medium**
*****	**Using Direct-To-Consumer Advertising Tools**	**3.341**	**Medium**				

***The impact is significant at level (α ≤ 0.05) * (n-1 = 411) * (T tabulated = 1.96)**

4.2.2 Attitudes toward Broadcast:

Table (4-2) shows that the means of Attitudes toward Broadcast statements are ranging between (3.21–3.46) and standard deviation ranges from (0.74 – 1.02). This result indicates that researched patients have medium important of Attitudes toward Broadcast. The average mean of Attitudes toward Broadcast statements is (3.30) that mean the patients have medium important of Attitudes toward Broadcast.

Table (4-2): Mean, Standard Deviation, t-Value, Ranking and Importance of Attitudes toward Broadcast

No.	Attitudes toward Broadcast	Mean	S. D.	t-Value	Sig.	Ranking	Importance
1	I believe that the use of direct advertising on television and radio will provide accurate information about the prescribed drugs.	**3.46**	**1.02**	**7.88**	**0.00**	**1**	**Medium**
2	I can trust the direct advertisement through television	**3.35**	**0.74**	**6.78**	**0.00**	**2**	**Medium**

	and radio for prescription drugs.						
3	I expect direct TV and radio advertising on prescribed drugs increases curiosity to know more about them.	**3.21**	**0.87**	**6.57**	**0.00**	**5**	**Medium**
4	I believe that direct advertising through television and radio on prescription drugs will be monitored by the competent health authorities.	**3.26**	**0.94**	**7.22**	**0.00**	**3**	**Medium**
5	Direct advertising through TV and radio can change the prescription drugs in my healthy lifestyle.	**3.24**	**0.96**	**6.12**	**0.00**	**4**	**Medium**
Attitudes toward Broadcast		**3.30**	**Medium**				

***The impact is significant at level (α ≤ 0.05) * (n-1 = 411) * (T tabulated = 1.96)**

4.2.3 Attitudes toward Using Printed

Table (4-3) shows that the means of Attitudes toward Using Printed statements are ranging between (3.12–3.41) and standard deviation ranges from (0.65 – 1.05). This result indicates that researched patients have medium important of Attitudes toward Using Printed statements. The average mean of patient's statements is (3.27) that mean the patients have medium important of Attitudes toward Using Printed.

Table (4-3): Mean, Standard Deviation, t-Value, Ranking and Importance of Attitudes toward Using Printed

No.	Attitudes toward Using Printed	Mean	S. D.	t-Value	Sig.	Ranking	Importance
1	I believe that the use of direct advertising through Magazine, Newspapers, & Brochure will provide accurate information about the prescribed drugs.	**3.18**	**0.65**	**4.18**	**0.00**	**4**	**Medium**
2	I can trust the direct advertisement through Magazine, Newspapers, & Brochure for prescription drugs.	**3.12**	**1.05**	**7.75**	**0.00**	**5**	**Medium**
3	I expect direct advertising through Magazine, Newspapers, & Brochure on prescribed drugs increases curiosity to know more about them.	**3.41**	**0.93**	**8.14**	**0.00**	**1**	**Medium**
4	I believe that direct advertising through Magazine, Newspapers, & Brochure on prescription drugs will be monitored by the competent health authorities.	**3.25**	**0.69**	**6.37**	**0.00**	**3**	**Medium**
5	Direct advertising through Magazine, Newspapers, & Brochure can change the prescription drugs in my healthy lifestyle.	**3.40**	**0.78**	**7.15**	**0.00**	**2**	**Medium**

*	**Attitudes toward Using Printed**	**3.27**	**Medium**

***The impact is significant at level (α ≤ 0.05) * (n-1 = 411) * (T tabulated = 1.96)**

4.2.4 Attitudes toward using social media

Table (4-4) shows that the means of Attitudes toward Using social media statements are ranging between (3.36–3.71) and standard deviation ranges from (0.55 – 0.94). This result indicates that researched patients have medium to high important of Attitudes toward using social media statements. The average mean of Attitudes toward using social media statements is (3.65) that mean the patients have medium important of Attitudes toward Using social media.

Table (4-4): Mean, Standard Deviation, t-Value, Ranking and Importance of Attitudes toward using social media

No.	Attitudes toward Using social media	Mean	S. D.	t-Value	Sig.	Ranking	Importance
1	I believe that the use of direct advertising through Social Media will provide accurate information about the prescribed drugs.	**3.71**	**0.64**	**8.74**	**0.00**	**1**	**High**
2	I can trust the direct advertisement through Social Media for prescription drugs.	**3.39**	**0.57**	**7.92**	**0.00**	**3**	**Medium**
3	I expect direct advertising through Social Media on prescribed drugs increases curiosity to know more about them.	**3.37**	**0.55**	**8.45**	**0.00**	**4**	**Medium**

4	I believe that direct advertising through Social Media on prescription drugs will be monitored by the competent health authorities.	**3.42**	**0.94**	**6.38**	**0.00**	**2**	**Medium**
5	Direct advertising through Social Media can change the prescription drugs in my healthy lifestyle.	**3.36**	**0.77**	**6.02**	**0.00**	**5**	**Medium**
*****	**Attitudes toward Using social media**	**3.65**	**Medium**				

***The impact is significant at level (α ≤ 0.05) * (n-1 = 412) * (T tabulated = 1.96)**

4.2.5 Dependent Variable (Consumer Awareness):

Table (4-5) shows that the means of Consumer Awareness ranges between (3.67 -4.61) with standard deviation ranges from (0.54 - 0.92). This indicates that the participant agree on medium important of Consumer Awareness statements. The average mean of Consumer Awareness dimensions is (3.89) this means that the participant believe that the research patients have High important of Consumer Awareness.

Table (4-5): Mean, Standard Deviation, t-Value, Ranking and Importance of Consumer Awareness

No	Sub-Variable	Mean	S. D.	t-Value	Sig.	Ranking	Importance
1	I am aware of my health problems.	**4.61**	**0.65**	**11.84**	**0.00**	**1**	**High**
2	I encourage the doctor to visit regularly.	**4.01**	**0.69**	**9.27**	**0.00**	**2**	**High**

3	I understand the reasons for my use of prescribed drugs.	**3.99**	**0.77**	**8.45**	**0.00**	**3**	**High**
4	I am aware of the side effects of prescribed drugs.	**3.67**	**0.89**	**8.65**	**0.00**	**10**	**High**
5	I am aware of the interactions between the foods and drugs prescribed to me.	**3.74**	**0.71**	**7.16**	**0.00**	**7**	**High**
6	I know the effects of drug interactions on drugs prescribed to me.	**3.73**	**0.54**	**7.24**	**0.00**	**8**	**High**
7	I realize the risks of prescription drugs.	**3.69**	**0.66**	**9.44**	**0.00**	**9**	**High**
8	Understand the methods of using prescribed drugs.	**3.79**	**0.92**	**10.89**	**0.00**	**5**	**High**
9	Understand health measures to prevent and avoid diseases.	**3.78**	**0.88**	**10.59**	**0.00**	**6**	**High**
10	I understand what to do to change my healthy lifestyle.	**3.92**	**0.64**	**9.42**	**0.00**	**4**	**High**
*	**Consumer Awareness**	**3.89**	**High**				

***The impact is significant at level (α ≤ 0.05) * (n-1 = 412) * (T tabulated = 1.96)**

4.3 Relationships between Variables:

Researcher used Bivariate Pearson Principles method to test the relationship between mean and sub variable variables. Table (4-6) shows that the relationships between Using Direct-To-Consumer Advertising Tools sub-variables are strong to very strong, where (r)

ranges between (0.68- 0.81) and the relationships between Consumer Awareness is also strong to very strong, where(r) ranges between (0.64 and 0.79). Table also shows that the relationships between Using Direct-To-Consumer Advertising Tools sub-variables and Consumer Awareness are strong to very strong, where 0.68 and 0.81. Finally, table shows that the relationship between Using Direct-To-Consumer Advertising Tools and Consumer Awareness is very strong, where r equals 0.74.

Table (4-6): Bivariate Pearson Principles Method Test for Relationships between Variables

No.	**Variable**	1	2	3	4	5
1	Attitudes toward Broadcast	----				
2	Attitudes toward Using Printed	0.68	----			
3	Attitudes toward Using social media	0.74	0.78	----		
4	**Using Direct-To-Consumer Advertising Tools**	**0.75**	**0.80**	**0.81**	----	
5	**Consumer Awareness**	**0.64**	**0.79**	**0.75**	**0.74**	----

4.4 Hypothesis Analysis:

Multiple regressions test used to investigate the Consumers Attitudes toward Using Direct-To-Consumer Advertising Tools for Prescription Drugs and their Impact on Consumers Awareness. After confirming normality and validity, reliability and relationships between variables, the following tests carried out to be able to use multiple regressions: Skewness, Durbin-Watson and multicollinearity (Sekaran 2003).

Durbin-Watson used to ensure independence of errors, If Durbin-Watson test value is about 2 the model does not violate this assumption. Table (4-7) shows that Durbin

Watson value is (d=1.740), which is about two and thisshows that the residuals are not correlated to each other. Therefore, the independence of errors not violated.

Multi-collinearity:

Variance Inflation Factor (VIF) and tolerance are used to test multicollinearity. If Variance Inflation Factor is less than 10 and tolerance is more than 0.1, the multicollinearity model does not violate this assumption. Table (4-7) shows also that the Variance Inflation Factor (VIF) values are less than 10, the tolerance values are more than 0.10 and Skewness between (_+1).This indicates that there is no multicollinearity within the independent variables of the study.

Table (4-7) Multicollinearity, Skewness and Durbin-Watson Tests

Sub variable	VIF	Tolerance	Skewness	Durbin-Watson
Attitudes toward Broadcast	**1.652**	**0.544**	**0.354**	**1.740**
Attitudes toward Using Printed	**1.452**	**0.465**	**0.412**	
Attitudes toward Using social media	**1.741**	**0.684**	**0.351**	

Main Hypotheses:

H01: There is no statistic significant impact of consumers' attitudes toward Using Direct-To-Consumer Advertising Toolsand their Awareness at ($\alpha \leq 0.05$).

Table (4-8) shows that when regression the three independent variables of consumers' attitudes toward Using Direct-To-Consumer Advertising Tools associate against dependent variable consumer Awareness. R^2 shows the conformity of the model for multiple regressions and explanations the variance of consumers' attitudes toward Using Direct-To-Consumer Advertising Tools on consumer Awareness. Since R^2 is 42.5% then the consumers' attitudes toward Using Direct-To-Consumer Advertising Tools can explain 55.5% of variance on consumer Awareness variable, since (R^2=0.425, F=57.351, Sig.=0.000). Therefore, the null hypothesis rejected and the alternative hypothesis accepted, which states that consumer' attitudes toward Using Direct-To-Consumer Advertising Tools (Attitudes toward Broadcast, Attitudes toward Using Printed and Attitudes toward Using social media) impact on consumer Awareness at ($\alpha \leq 0.05$).

Table (4-8): ANOVA Test Regressing for consumer' attitudes toward Using Direct-To-Consumer Advertising Tools Together against consumer Awareness

Model	R	R^2	Adjusted R^2	F	Sig.
Consumer Awareness	**0.652**	**0.425**	**0.412**	**57.351**	**0.000[b]**

Table (4-9) shows the impact of each consumer' attitudes toward Using Direct-To-Consumer Advertising Tools sub variable on consumer Awareness.

Table (4-9): ANOVA Test - Regression the Three consumer' attitudes toward Using Direct-To-Consumer Advertising Tools Sub-Variable Together against Development ofconsumer Awareness

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	0.021	0.054		0.425	0.577
Attitudes toward Broadcast	0.255	0.021	0.264	12.25	0.019
Attitudes toward Using Printed	0.164	0.041	0.188	4.26	0.006
Attitudes toward Using social media	0.411	0.031	0.145	8.31	0.031

***The impact is significant at level (α ≤ 0.05)** *** (n-1 = 411)** *** (T tabulated = 1.96)**

$H_{01.1}$: H01.1: There is no statistic significant impact of consumer's attitudes toward Using Broadcast and their Awareness, at (α≤0.05).

Table (4-9) shows that there is a significant impact of consumer's attitudes toward Using Broadcast on consumer Awareness, where (Beta=0.264, t=12.25, sig. =0.019, p<0.05). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted which states that consumer's attitudes toward Using Broadcast impacts of nconsumer Awarenessat (α≤0.05).

$H_{01.2}$: There is nostatistic significant impact of consumers' attitudes toward Using Printed and their Awareness, at ($\alpha \leq 0.05$).

Table (4-9) shows that there is a significant impact of consumers' attitudes toward Using Printed on consumer Awareness where (Beta=0.188, t=4.26, sig. =0.006, $p<0.05$). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted which states that Attitudes toward Using Printedimpacts development of consumer Awarenessat ($\alpha \leq 0.05$).

$H_{01.3}$: There is no statistic significant impact of consumer's attitudes toward Using social media and their Awareness, at ($\alpha \leq 0.05$).

Table (4-9) shows that there is a significant impact of consumer's attitudes toward Using social media on consumer Awareness where (Beta=0.145, t=8.31, sig.=0.031, $p<0.05$). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted which states that consumer's attitudes toward Using social media impacts development of consumer Awareness at ($\alpha \leq 0.05$).

From above table (4-9) show that social media is the most influential consumer awareness where the researcher explains the attention of consumers to these modern tools has led to greater belief than spreading across these companies therefore means giving explicit attention to these tools to strengthen competitive position.

CHAPTER FIVE

5.1 The Main Result of Study

5.2 Study Conclusion

5.3 Study Recommendations

(5-1) the main results of the study

The main Result:

The study explored a number of important and significant results that the researcher hopes that they would lead to novel contributions to theory and relevant literature. Based on the data analysis and hypotheses testing in chapter 4, the research results generated from this piece of work can be summarizing as follows:

- The means of Attitudes toward Broadcast statements are ranging between (3.21 – 3.46) and standard deviation ranges from (0.74 – 1.02). This result indicates that researched patients have medium important of Attitudes toward Broadcast. The average mean of Attitudes toward Broadcast statements is (3.30) that mean the patients have medium important of Attitudes toward Broadcast.
- The means of Attitudes toward Using Printed statements are ranging between (3.12 – 3.41) and standard deviation ranges from (0.65 – 1.05). This result indicates that researched patients have medium important of Attitudes toward Using Printed statements. The average mean of patient's statements is (3.27) that mean the patients have medium important of Attitudes toward Using Printed.
- The means of Attitudes toward Using social media statements are ranging between (3.36 – 3.71) and standard deviation ranges from (0.55 – 0.94). This result indicates that researched patients have medium to high important of Attitudes toward using social media statements. The average mean of Attitudes toward using social media statements is (3.65) that mean the patients have medium important of Attitudes toward Using social media.

- The means of Consumer Awareness ranges between (3.67 -4.61) with standard deviation ranges from (0.54 - 0.92). This indicates that the participant agree on medium important of Consumer Awareness statements. The average mean of Consumer Awareness dimensions is (3.89) this means that the participant believe that the research patients have High important of Consumer Awareness.
- The regression of the three independent variables of consumers' attitudes toward Using Direct-To-Consumer Advertising Tools associate against dependent variable consumer Awareness. R2 shows the conformity of the model for multiple regressions and explanations the variance of consumers' attitudes toward Using Direct-To-Consumer Advertising Tools on consumer Awareness. Since R2 is 42.5% then the consumers' attitudes toward Using Direct-To-Consumer Advertising Tools can explain 42.5% of variance on consumer Awareness variable, since (R2=0.425, F=57.351, Sig.=0.000).
- Consumer' attitudes toward Using Direct-To-Consumer Advertising Tools (Attitudes toward Broadcast, Attitudes toward Using Printed and Attitudes toward using social media) impact on consumer Awareness at ($\alpha \leq 0.05$).The results of this study supported by the previous studies such as ((Zadeh et. al., 2017) , (Hwang & Young, 2017)
- There is a significant impact of consumer's attitudes toward Using Broadcast on consumer Awareness, where (Beta=0.264, t=12.25, sig. =0.019, $p<0.05$). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted which states that consumer's attitudes toward Using Broadcast impacts

of n consumer Awareness at ($\alpha \leq 0.05$). The results of this study supported by the previous studies such as (Wingate and Xie , 2013) , (Lee et al. , 2015).

- There is a significant impact of consumers' attitudes toward Using Printed on consumer Awareness where (Beta=0.188, t=4.26, sig. =0.006, $p<0.05$). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted which states that Attitudes toward Using Printed impacts development of consumer Awareness at ($\alpha \leq 0.05$). The results of this study supported by the previous studies such as(Yang , 2018).
- There is a significant impact of consumer's attitudes toward Using social media on consumer Awareness where (Beta=0.145, t=8.31, sig. =0.031, $p<0.05$). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted which states that consumer's attitudes toward Using social media impacts development of consumer Awareness at ($\alpha \leq 0.05$). The results of this study supported by the previous studies such as(Siddiqi and Shah , 2017) ,

Recommendations

In the light of the results of this study, the study highlights the following recommendations:

- The study recommends using of direct advertising on television and radio that provide accurate information about the prescribed drugs.
- Using direct TV and radio advertising on prescribed drugs in order to increases curiosity to know more about drugs.

- The study recommends using Magazine, Newspapers, & Brochure on prescribed drugs in order to increases curiosity to know more about drugs.
- Provide the Patients accurate information about the prescribed drugs by use of direct advertising through Magazine, Newspapers, & Brochure.
- Change the prescription drugs in healthy lifestyle by using direct advertising through Magazine, Newspapers, & Brochure.
- Use of direct advertising through Social Media to provide accurate information about the prescribed drugs.
- Conducting training programs to train marketing managers on how to implement new marketing strategy.
- Using consumer' attitudes toward Using Direct-To-Consumer Advertising Tools assessment to check and verify if it proper use or not.
- The study implemented a quantitative method to collect data from the study sample; therefore, the study recommends using qualitative method for future research to validate the result of the study.
- Further studies recommended to be conducted in other sector in Jordan.

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Appendix (1):

Distinguished Ladies and Gentlemen,

Peace, mercy and blessings of God

The researcher conducts a study entitled "Consumers Attitudes toward Using Direct-To-Consumer Advertising Tools for Prescription Drugs and their Impact on Consumers Awareness". This is part of the requirements of obtaining the MBA degree from the Middle East University.

Because the subject concerns patients so the success of this study is based on the extent of your contribution to read carefully and then answer the paragraphs by placing a (√) in the box that corresponds to your opinion.

Thank you in advance for your appreciation and cooperation.

With my best regards,

Supervisionby :Dr Amjad Twaiqat

Researcher: Rawand Sami Al-Oqaili.

Demographic characteristics

1.Gender:

Male ☐ Female ☐

2. Age:

19 to 25 years ☐ 26 to 35 years ☐

36 o 45 years ☐ 46 and over ☐

3.Scientific qualification:

Bachelor ☐ Diploma ☐

Master ☐ PhD ☐ below that ☐

Please indicate the opinion in the following sentences to determine the extent of agreement in each sentence:

First: Consumers Attitudes toward Using Direct-To-Consumer Advertising Tools for Prescription Drugs.

Strongly Disagree	Disagree	Neutral	agree	Strongly agree	The question areas and their paragraphs
1	2	3	4	5	
Consumers Attitudes toward Using Radio and TV for Prescription Drugs. **Definition: is to make advertisements through television and radio for Prescription Drugs.**					
					1. I believe that the use of direct advertising on television and radio will provide accurate information about the prescribed drugs.
					2. I can trust the direct advertisement through television and radio for prescription drugs.
					3. I expect direct TV and radio advertising on prescribed drugs increases curiosity to know more about them.
					4. I believe that direct advertising through television and radio on prescription drugs will be monitored by the competent health authorities.
					5. Direct advertising through TV and radio can change the prescription drugs in my healthy lifestyle.

Strongly Disagree	Disagree	Neutral	agree	Strongly agree	The question areas and their paragraphs
1	2	3	4	5	
Consumers Attitudes toward Using Magazine, Newspapers, & Brochure for Prescription Drugs. **Definition:Is to make advertisements through journals, newspapers, and publications for prescription drugs from doctors.**					
					1. I believe that the use of direct advertising through Magazine, Newspapers, & Brochure

					will provide accurate information about the prescribed drugs.
					2. I can trust the direct advertisement through Magazine, Newspapers, & Brochure for prescription drugs.
					3. I expect direct advertising through Magazine, Newspapers, & Brochure on prescribed drugs increases curiosity to know more about them.
					4. I believe that direct advertising through Magazine, Newspapers, & Brochure on prescription drugs will be monitored by the competent health authorities.
					5. Direct advertising through Magazine, Newspapers, & Brochure can change the prescription drugs in my healthy lifestyle.

Strongly Disagree	**Disagree**	**Neutral**	**agree**	**Strongly agree**	**The question areas and their paragraphs**
1	**2**	**3**	**4**	**5**	
Consumers Attitudes toward Using Social Media for Prescription Drugs. Definition:Is to provide advertisements through social media (Internet, Facebook, Whatsapp, and other electronic means) for prescription drugs from doctors.					
					1. I believe that the use of direct advertising through Social Media will provide accurate information about the prescribed drugs.
					2. I can trust the direct advertisement through Social Media for prescription drugs.
					3. I expect direct advertising through Social Media on prescribed drugs increases curiosity to know more about them.
					4. I believe that direct advertising through Social Media on prescription drugs will be monitored by the competent health authorities.
					5. Direct advertising through through Social Media can change the prescription drugs in my healthy lifestyle.

Second: Consumers awarenessof the prescribed drugs used by them.

Strongly Disagree	Disagree	Neutral	agree	Strongly agree	The question areas and their paragraphs
1	2	3	4	5	
Consumers awarenessof the prescribed drugs used by them. Definition: The extent to which consumers know, understand and understand prescription drugs prescribed by physicians.					
					1. I am aware of my health problems.
					2. I encourage the doctor to visit regularly.
					3. I understand the reasons for my use of prescribed drugs.
					4. I am aware of the side effects of prescribed drugs.
					5. I am aware of the interactions between the foods and drugs prescribed to me.
					6. I know the effects of drug interactions on drugs prescribed to me.
					7. I realize the risks of prescription drugs.
					8. Understand the methods of using prescribed drugs.
					9. Understand health measures to prevent and avoid diseases.
					10. I understand what to do to change my healthy lifestyle.

جـــامـعـــة الـــشـــرق الأوســـــط
MIDDLE EAST UNIVERSITY

السيدات والسادة االأفاضل ،

السلام عليكم ورحمة الله وبركاته

وبعد...

تجري الباحثة دراسة بعنوان" اتجاهات المستهلكين نحو استخدام أدوات الإعلان المباشر للمستهلك للأدوية الموصوفة وأثرها على وعي المستهلكين وهي جزء من متطلبات الحصول على شهادة الماجستير في إدارة االأعمال من جامعة الشرق الوسط، ولكون الموضوع يخص المرضى لذا فإن نجاح هذا الدراسة يرتكز على مدى مساهمتكم في قراءتها بدقة ومن ثم الاجابة عن فقراتها وذلك بوضع إشارة(√) في المربع الذي يتفق مع رأيكم.

و أشكركم سلفا عن تقديركم وتعاونكم.

وتقبلوا فائق الاحترام والتقدير،

إشراف الدكتور الفاضل: د. أمجد طويقات

الباحثة: روند سامي العقيلي.

الخصائص الديموغرافية

1. النوع الاجتماعي

ذكر ☐ أنثى ☐

2. العمر

من19 – 25سنة ☐ من26 – 35سنة ☐

من 36 – 45 سنة ☐ من 46 فأكثر ☐

3-المؤهل العلمي

بكالوريوس ☐ دبلوم ☐

ماجستير ☐ دكتوراه ☐ ما دون ☐

الرجاء بيان الرأي بالعبارات التالية لتحديد مدى الإتفاق بما يرد في كل عبارة من عبارات

أولا: اتجاه المستهلكين حول استخدام أدوات الاعلان المباشر للإعلان عن الأدوية الموصوفة.

محاور الاستبانة وفقراتها	أؤيد بقوة	أؤيد	محايد	لا أؤيد	لا أؤيد بقوة
	5	4	3	2	1
أ.اتجاه المستهلكين حول استخدام التلفاز والراديو للإعلان عن الأدوية الموصوفة: **التعريف الاجرائي: هو تقديم إعلانات عن طريق التلفاز والراديو للأدوية الموصوفة بوصفة طبية من الأطباء.**					
1. أعتقد أن استخدام الاعلان المباشر عبر التلفاز والراديو سيوفر معلومات دقيقة عن الأدوية الموصوفة.					
2. يمكن أن أثق بالإعلان المباشر عبر التلفاز والراديو عن الأدوية الموصوفة.					
3. أتوقع أن الاعلان المباشر عبر التلفاز والراديو عن الأدوية الموصوفة يزيد من الفضول للمعرفة أكثر عنها.					
4. أرى أن الاعلان المباشر عبر التلفاز والراديو عن الأدوية الموصوفة سيوفر رقابة عليها من قبل الجهات الصحية المختصة.					
5. يمكن أن يغير الاعلان المباشر عبر التلفاز والراديو عن الأدوية الموصوفة في نمط حياتي الصحي.					

محاور الاستبانة وفقراتها	أؤيد بقوة	أؤيد	محايد	لا أؤيد	لا أؤيد بقوة
	5	4	3	2	1
ب. اتجاه المستهلكين حول استخدام المجلات، الصحف، والمنشورات للإعلان عن الأدوية الموصوفة **التعريف الاجرائي: هو تقديم إعلانات عن طريق المجلات، الصحف، والمنشورات للأدوية الموصوفة بوصفة طبية من الأطباء.**					
1. أعتقد أن استخدام الاعلان المباشر عبر المجلات، والصحف، والمنشورات سيوفر معلومات دقيقة.					
2. يمكن أن أثق بالإعلان المباشر عبر المجلات، والصحف، والمنشورات عن الأدوية الموصوفة.					
3. أتوقع أن الاعلان المباشر عبر المجلات، والصحف، والمنشورات عن الأدوية الموصوفة يزيد من فضولي للمعرفة أكثر عنها.					
4. أرى أن الاعلان المباشر عبر المجلات، والصحف، والمنشورات عن الأدوية الموصوفة سيوفر رقابة عليها من قبل الجهات الصحية المختصة.					
5. يمكن أن يغير الاعلان المباشر عبر المجلات، والصحف، والمنشورات عن الأدوية الموصوفة في نمط حياتي الصحي.					

محاور الاستبانة وفقراتها	أؤيد بقوة	أؤيد	محايد	لا أؤيد	لا أؤيد بقوة
	5	4	3	2	1
أ. ج. اتجاه المستهلكين حول استخدام وسائل التواصل الاجتماعي للإعلان عن الأدوية الموصوفة التعريف الاجرائي: هو تقديم إعلانات عن طريق وسائل التواصل الاجتماعي (برامج الانترنت، الفيسبوك، الواتساب، وغيرها من وسائل إلكترونية) للأدوية الموصوفة بوصفة طبية من الأطباء.					
1. أعتقد أن استخدام الاعلان عبر وسائل التواصل الاجتماعي سيوفر معلومات دقيقة.					
2. يمكن أن أثق بالإعلان المباشر عبر وسائل التواصل الاجتماعي عن الأدوية الموصوفة.					
3. أتوقع أن الاعلان المباشر عبر وسائل التواصل الاجتماعي عن الأدوية الموصوفة يزيد من فضولي للمعرفة أكثر عنها.					
4. أرى أن الاعلان المباشرعبر وسائل التواصل الاجتماعي عن الأدوية الموصوفة سيوفر رقابة عليها من قبل الجهات الصحية المختصة.					
5. يمكن أن يغير الاعلان المباشرعبر وسائل التواصل الاجتماعي عن الأدوية الموصوفة في نمط حياتي الصحي.					

ثانيا: وعي المستهلكين بالأدوية الموصوفة المستخدمة من قبلهم.

محاور الاستبانة وفقراتها	أؤيد بقوة	أؤيد	محايد	لا أؤيد	لا أؤيد بقوة
	5	4	3	2	1
د. وعي المستهلكين بالأدوية الموصوفة المستخدمة من قبلهم **التعريف الإجرائي: مدى معرفة، إدراك وفهم المستهلكين للأدوية الموصوفة بوصفة طبية من قبل الأطباء.**					
1. أعي بمشكلتي الصحية.					
2. أشجع زيارة الطبيب المختص بشكل منتظم.					
3. أدرك دواعي استخدامي للأدوية الموصوفة لي.					
4. أعي الآثار الجانبية للأدوية الموصوفة لي.					
5. أعي التفاعلات بين الأغذية والأدوية الموصوفة لي.					
6. أعرف آثار التفاعلات الدوائية للأدوية الموصوفة لي.					
7. أدرك مخاطر الأدوية الموصوفة لي.					
8. أفهم طرق استخدام الأدوية الموصوفة لي.					
9. أدرك الإجراءات الصحية للوقاية وتجنب الأمراض.					
10. أدرك ما يجب اتباعه من تغيير نمط حياتي الصحي.					

Appendix (2): Panel of Referees Committee

Prof .Name	University
Dr. Ahmad Ali Saleh	Middle East University
Dr. Mohammed Adaileh	Middle East University
Dr. Abbas Rawashdeh	Al-Zaytoonah University
Dr.Neamah Al-Khafaji	Al-Isra University
Dr.AkthamAlsrayrah	Al balqa Applied University
Dr. Khaled Alemosh	Al-ZaytoonahUnivrsity
Dr. Firas Alshlabe	Al balqa Applied University
Dr. ReyadAlkhwaldeh	Al balqa Applied University
Dr. Firas Rifai	Al-Zaytoonah University
Dr. Emad Almoala	Amman Arab University
Dr. Mohammed Ajlouni	Al-Zaytoonah University
Dr. Nafer Ali	Al-Zaytoonah University
Dr. Khalid Hamdan	Amman Arab University