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STARZ-DRP: Improving Efficiency of Patient Care in Community Pharmacies

Nazri Nordin and Mohamed Azmi Hassali

Abstract

Customers are always becoming the center of interest among the physicians, dentists, and pharmacists in the healthcare system. However, they are always having favorable feeling with the community pharmacists (CPs) as the first spot to seek advice. For that reason, it is essential to determine the character, behavior, and habit of customers toward the CPs and their extended pharmacy services. In addition, it is critical to determine the possible factors, which might have an effect on their characters, behaviors, and habits. The outcome of the analysis might help the CPs to understand the scenario in a particular way. Afterward, a structured and systematic approach known as “STARZ-DRP” is instigated as a basic skill to ensure whether each pharmacist has the self-confidence and self-competence to interact with the customers. The entire course of action shall empower the strength of personality among the CPs in the healthcare system.

Keywords: community pharmacist, medication protector, STARZ-DRP, drug-related problems, customer

1. Introduction

Customers are always becoming the center of interest among the health providers in the healthcare system [1]. The healthcare modus operandi might be unsuccessful in achieving its goal if the customers are not willing to amalgamate themselves with the health professional. Therefore, it is critical that the healthcare practitioners such as physicians, dentists, and pharmacists be aware of the character or nature of their customers toward the services. In other words, the practitioners must possess quality characteristics or features, which enable them to have an effect on the character, development, or behavior of the customers toward them. Otherwise, the customers shall fail to show their concern for the provision of a wide range of local services.

Among the health professionals, the community pharmacists (CPs) turn into the most accessible practitioner in the healthcare system [2]. They, at all times, fulfill the function as the first spot which the people shall seek for initial medical and medication advice [2]. It shall reflect a clear image for CPs as a “gatekeeper” in the healthcare system [3] when the CPs are having considerable skill, proficiency, and intelligence to make a triage action plan [4]. Triage action plan is precisely marked as a strategy to assist the people to determine whether their medical problems

require a specific medication, further medical examination, or restricted guidance [4]. Such course of action shall be helpful to ensure that the people are accessible to the excellence level of healthcare service, which shall have the chance to keep them away from unwanted side effect or adverse reaction due to inappropriate medicine use [5]. Nonetheless, it is critical to determine the phenomenon which the customer acts or conducts himself or herself toward the CPs particularly related to the provision of extended pharmacy services. The performance shall help the CPs to discern the way of behaving among the people when they visit the pharmacies for a specific purpose. For that reason, it is necessary to conduct a study to find out the features, characters, or habits behind the behaviors among the people of extended pharmacy services.

In Section 2, we shall outline a general description showing the awareness among the people of extended pharmacy services through their feeling, sensation, consciousness, perception, or recognition. The way such illustration turns out is derived from the outcome notified in the previous studies which was performed in many countries.

In Section 3, a structured and systematic approach known as “STARZ-DRP” is brought into use or operation for the first time as an essential foundation or starting point to provide a wide range of extended pharmacy services. “STARZ-DRP” is a simple mnemonic, which emerges from the pharmaceutical care concept. It maneuvers the CPs to assess the customer-related information, formulate a therapy plan, and establish a follow-up schedule to review the outcome of the plan. This modus operandi aims to help the CPs to determine if the customers’ health problems are being caused by a specific medication or if they require a specific medication, extended services, referral to other health professionals, or advice to resolve their problems. Such course of action is essential to ensure whether the customers are accessible to medications, which are safe, effective, indicative, and cost-effective. Foremost, it is essential to make sure the CPs are demonstrating a quality, characteristic, or feature as a competence health professional. If everything turns out all right, the people shall act or conduct oneself in a specified behavior toward the extended pharmacy services. Otherwise, the customers might refuse to agree to the extended roles of CPs in the healthcare system.

In Section 4, we shall discuss in detail taking into account different issues or ideas notified in Sections 2 and 3. Afterward, we shall weigh up the possible action to bring the “STARZ-DRP” to the attention as a potential marketing tool that the CPs use to market particular courses of action based on the consumer’s behavior, or in other words, based on the consumer’s situation.

2. Methods

Scholars in the Universiti Sains Malaysia, Malaysia, have carried out, accomplished, and made a list of awareness among the people of extended pharmacy services [6]. They commerce the first part of the action, typically to achieve the aim by executing a systematic search of international literature reviews and studies, using Google Scholar as an electronic database, searching for open access articles, which point out the extended pharmacy services, perception of the extended services, and barriers toward the services, starting from January 2005 till January 2017. For that reason, it is reasonable to illustrate the findings in this column as the way to notify the possible behaviors among the people toward the CPs and their extended services.

3. Results

In the writing paper, the scholars point out that there are a wide range of features, characters, and attributes among the people toward the CPs and the extended pharmacy services [6]. For example, they are not a regular shopper of the pharmacies [7] and they express complete disapproval of the CPs to criticize their lifestyles [7]. Also, they possess insufficiency of adequate confidence and trust of CPs [8–13], lack of interrelationship between pharmacist and customer [7, 11, 14–17], and are not ready to reform the long-established act in such a way to involve directly with the CPs [7]. Sometimes, they move with urgent haste and have no time to spend with the CPs [7]. Foremost, most of them manifest lack of facts and information about the extended pharmacy services [7], which make them bewildered about them [8, 11, 15, 18, 19], and they are not ready to reimburse the CPs for the services [20].

Other features which have the capacity to have an effect on the character, development, or behavior of the people toward the CPs and the extended services are the characteristics of the CPs themselves. For example, the people be aware of through observation or information that the CPs bring forward the business-oriented services as the center of interest in the pharmacies [12, 14–16, 21–23], particularly when their pharmacy program places great emphasis on product rather than patient-oriented elements [18], CPs are not always available in the premise when they need to consult them about their medical problem [7], CPs possess lack of self-confidence [8, 18, 20] and self-competence [8, 19] due to lack of knowledge, skills, [7, 9, 10, 13, 15, 17, 18, 20, 22, 24, 25], and trainings [8, 15, 16, 20, 25] about the extended services, CPs have been too busy with their daily business activity [7] and they have no time to counsel the people [7–10, 20, 21, 23, 26], CPs are not well trained in particular skills or type of behavior through sustained practice and instruction during their pharmacy program [22, 25], CPs inform that the extended services are typically not a formal practice in pharmacy [18, 20], and CPs are having no help or participation from other healthcare providers such as physicians to work, function, or do something well in the pharmacies [7–9, 11, 15, 20, 21, 25, 27].

Also, the writing paper put in the picture the operation in the pharmacies has a prominent attribute or aspect, which has an effect on the character, development, and behavior of the people toward the CPs and their extended services. For example, the people shall refuse to agree to the extended services if the pharmacies possess a shortage of CPs [7, 18, 20] and staffs [23], absence of a private counseling space [7–9, 19], a documentation scheme [14] and a high standard counseling approach [7, 13, 22], lack of financial support [7, 8], and insufficient support from the business possessor [7, 22] or administration [8].

4. “STARZ-DRP” as an instrument to magnify the image of CPs

“STARZ-DRP” consists of letters, which constitute a systematic sequence of assessing individual features (see **Table 1**). It is essential that the CPs must follow the sequences so that they might not fail to include some critical features, which are potential to be the origins of the ongoing medical disorder. The first in the sequence (STAR) is helping the CPs to rule out if the abnormal vital signs and physical features (see **Table 2**) need for a particular medication, medical examination, or advice. **Figure 1** illustrates the flowchart of the modus operandi. The following sequence (Z) is about helping out the CPs to identify the actual or potential drug-related problems (see **Table 3**).

Letter	Description
S	Symptom presentation refers to subjective evidence of health problem perceived by the patient.
T	Time of onset and duration of the present symptoms.
A	Associated symptoms refer to patient symptoms explored and determined by the pharmacist during the interview. It does not refer to the symptoms presented earlier by the patient. This is done by using the pictorial documentation form. To aid and ease the pharmacist during the interview, the human body is arbitrarily divided into four regions: (i) front: the part of the body facing the pharmacist (asking for symptoms like bloating, heartburn, nausea, vomiting, breathlessness, etc.), (ii) back (asking for symptoms like lower and upper back pain, shoulder pain, and neck pain), (iii) upper (head) (asking for symptoms like headache, dizziness, problems with sleep, etc.), and (iv) lower (asking for symptoms like numbness in both legs and hands, constipation, and swollen feet). Perhaps, the method is likened to a filtering or screening process to rule out the presence of severe symptoms.
R	Recurrence problem refers to the symptoms that have been treated before, specifically when the symptoms recur and persist despite the treatment prescribed.
Z	Zoom into the patient’s medication experience that refers to information collected by the pharmacist related to any medical problems (for example, hypertension, diabetes, hyperthyroid, etc.), medication utilization (for example, use of prescription and nonprescription drugs, and herbal supplements), immunization history, allergies, drug sensitivities, drug side effects, adverse reactions, and the consumption of alcohol, caffeine and tobacco.

**This is not a diagnostic tool, rather it is a format with the purpose of organizing a community pharmacist’s knowledge in a manner that allows he/she to begin identifying the actual and potential drug-related problems and subsequently referring triage patients to the appropriate healthcare professionals.*

**The patient’s vital signs will be measured when necessary. At times, the patient’s blood pressure, pulse rate, and body temperature are measured to aid the pharmacist in assessing the appropriateness of symptoms for self-medication.*

Table 1.
Definition of letters in STARZ^{#,*}.

<ul style="list-style-type: none">• Any chest pain in a patient looking gray, sweating, or ill• Severe pain in the chest, abdomen, head, or ears• Blood loss from any orifice• Increasing breathlessness• Difficulty in swallowing• Tenderness over blood vessels• A history of severe injury, particularly a penetrating injury, or loss of consciousness• Persistent raised temperature, blood pressure, or heart rate• Loss of weight• Anorexia• Yellow skin color• Ankle swelling• Yellow skin color• Yellow or green sputum• Yellow or green discharge from penis or vagina• Urinary symptoms• Any menstrual abnormality• Any swelling or lump of any size, including joints• Weakness in arms or legs• Any visual changes
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Source: [43].

Table 2.
List of signs and symptoms acquire immediate medical attention.

Figure 1.
Flowchart of STARZ-DRP modus operandi. GP = general practitioner, DRP = drug-related problem, AQ = assessment question, and *auxiliary assessment question. Refer to **Table 3** for a list of the drug-related problems.

“STARZ-DRP” is converted into a printed paper to ensure the CPs have the chance to record their action of assessing someone (see **Figure 2**). The printed paper shall help the CPs to reminisce about the drug therapy plan as the way to evaluate and impart it to the customers’ health status. A referral form is established and illustrated in **Figure 3**. It aims to ease the nonverbal communication between physician and pharmacist regarding the CPs’ findings in the first place.

Indication
DRP#1: No indication for nonprescription medications
DRP#2: Uncertainty about the indication of drug
DRP#3: Need for additional therapy
Effectiveness
DRP#4: Inappropriate drug choice
DRP#5: Dose too low
DRP#6: Ineffective therapy
DRP#7: Interference with medical therapy by smoking/alcohol consumption
DRP#8: Lack of understanding of the medication
DRP#9: Monitoring required
Safety
DRP#10: Use of medication to which the patient is allergic
DRP#11: Adverse drug events
DRP#12: Potential drug-disease interaction
DRP#13: Potential drug-drug interaction
DRP#14: Dose too high
Compliance
DRP#15: Problems arising from financial impact of therapy
DRP#16: Interference with medical therapy by cultural/religious beliefs
DRP#17: Failure of the patient to adhere to labeling instructions
DRP#18: Others

Table 3.
Categories of drug-related problems.

“STARZ-DRP” is a well-defined tool, which have the chance to influence the behavior among the customers toward the extended services of CPs. It reflects that the CPs are in a suitable state to act as a medication protector in the healthcare system. The materials that provide official information or evidence or that serve as a record are a critical process of establishing the truth, accuracy, or validity of the CPs’ actions. The entire action or process of using the tool shall have the chance to improve the acceptance among the customers toward the CPs’ extended services particularly when the CPs are showing their seriousness to safeguard the medication use.

5. Discussion

Customers are the humans who possess the feeling of wanting to know or learn about something or someone as the way to give an affirmative answer to the action of introducing a plan, an intention, or an idea. Most of the time, the answers are possibly influenced by their character, development, or behavior. Irene Carrasco, in her writing, pinpoints that there are eight factors that shall influence customers to act in a specific behavior, which are age, culture, socioeconomic level, perception, attitude, trend, personality, and experience [28].

Age: character, behavior, and attitude toward a thought or suggestion as a possible course of action might not be the same as each other if someone performs a study involving different ages [29]. Older and younger customers might assign a standard or value to a purpose or intention according to their particular scale [29]. Earlier studies clearly show the existence or truth of the outcome by giving proof or evidence for attention [30, 31]. It discloses that the older customers possess greater emotional control and less negative effect toward a plan or intention [30, 31]. They integrate their practical contact with and observation of facts or events to reflect their character, behavior, and attitude [32]. Also, they are always possessing themselves toward positive than negative reaction [33], reflecting favorable amygdala

Patient Name		Date
Demographic Information		
I/C number :		Gender : ☐ Male ☐ Female
Home Address :		
Race : ☐ Malay ☐ Chinese ☐ Indian ☐ Other :		
Religion : ☐ Muslim ☐ Christian ☐ Buddhist ☐ Hindu ☐ Other :		
Marital status : ☐ Single ☐ Married		
Occupation : ☐ Employee ☐ Self-Employed ☐ Unemployed ☐ Retired ☐ Housewife		
PHARMACY SELF-CARE ADVICE FORM		
Contact		
Hse phone :		
Cell-phone :		
E-mail :		
A. Request Related To : (check all that apply)		
☐ Treatment for condition : ☐ A specific product : ☐ Other, specify :		
(1). Check patients' signs and symptoms		(2). Zoom to identify drug-related problem
<div>1. State sign and symptom (refer figure 1.0) :</div> <div>2. Duration :</div> <div>3. Other associated symptom ☐ Yes (specify) : ☐ No</div> <div>4. Recurrence sign and symptom ☐ Yes ☐ No</div> <div>Associated symptom(s)</div> <div><div>1. Front part: ☐ Bloating ☐ Heartburn ☐ Nausea ☐ Vomiting ☐ Breathlessness</div><div>2. Back part: ☐ Low back pain ☐ Upper back pain ☐ Shoulder pain ☐ Neck pain</div><div>3. Upper part: ☐ Headache ☐ Dizziness ☐ Problem with sleep</div><div>4. Lower part: ☐ Numbness of hand(s) ☐ Numbness of leg(s) ☐ Swollen feet(s) ☐ Constipation</div></div> <div>☐ Other(s):</div> <div>BP: Pulse: Temp (°C):</div>		<div>1. Have you tried some products to resolve the problem ? ☐ Yes ☐ No Specify the product ::</div> <div>2. Have you consulted a doctor to resolve the problem ? ☐ Yes ☐ No Specify the product :</div> <div>3. Do you have a known medical problem ? ☐ Yes ☐ No Type of medical problem and how long :</div> <div>4. Are you allergic to any drug or other substance ? ☐ Yes ☐ No Type of drug/substance :</div> <div>5. Are you taking any prescription drug ? ☐ Yes ☐ No Specify the product :</div> <div>6. Are you taking any other medications/herbals/supplements ? ☐ Yes ☐ No Specify the product :</div> <div>7. Do you use of alcohol/caffeine/tobacco ? ☐ Yes ☐ No Specify the use:</div> <div>8. Do you stop taking medication when you feel better ? ☐ Yes ☐ No</div> <div>9. Do you stop taking medication when you feel worse ? ☐ Yes ☐ No</div> <div>10. Do you have any concern about the cost of therapy ? ☐ Yes ☐ No</div> <div>11. Are you pregnant ? (Optional question) ☐ Yes ☐ No</div>

Figure 1.0

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(3). Sign and Symptom Assessment		
The presenting signs/symptoms is/are NOT easily recognized as self-treatable condition ? ☐ Yes ☐ No	The presenting signs/symptoms is/are too serious for self-treatment ? ☐ Yes ☐ No	The patient requires further medical examination ? ☐ Yes ☐ No

(4). Pharmacy Care Plan		
☐ Recommended Specify : ☐ OTC product ☐ Poison C & D ☐ Herbal product ☐ Homeopathic product ☐ Other, specify : List of product :	☐ Referral Specify : ☐ General practitioner (GP) ☐ Hospital ☐ Conditional referral to GP (if not better in # of days) Reason for referral :	☐ Health screening/promotion Specify : ☐ BP measurement ☐ Pregnancy test ☐ Blood cholesterol ☐ Blood/Urine glucose ☐ Other, specify : Describe advice :

(5). Follow-up
Provide reasons and how to :

B. States Drug-Related Problem			
Indication	Effectiveness	Safety	Compliance
☐ No indication for non-prescription medication ☐ Uncertainty about the indication of drug ☐ Need for additional therapy	☐ Inappropriate drug choice ☐ Dose too low ☐ Ineffective therapy ☐ Interference with medical therapy by alcohol /caffeine/smoking consumption ☐ Lack of understanding of the medication ☐ Monitoring required	☐ Use of medication to which the patient is allergic ☐ Adverse drug events ☐ Potential drug –disease interaction ☐ Potential drug-drug interaction ☐ Dose too high	☐ Problems arising from financial impact of therapy ☐ Interference with medical therapy by cultural/religious beliefs ☐ Failure of the patient to adhere to labeling instructions ☐ Others

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Figure 2.
Pharmacy self-care advice form.

activation [34]. For that reason, it is critical to continuously give them information on a particular subject as the way to ensure the action of consenting to receive or undertake something offered; whereas the CPs must take possession of the role to educate the younger customers to perceive the significance, explanation, or cause of providing the extended services.

Culture: It is the attitude and behavioral characteristic of a particular social group. It shall reflect the way the particular group possess their feelings or thoughts in response to a situation or event. At the present time, the healthcare system encounters a digital culture, in which the customers might have the access to become an online shopper [35], in which they can make the purchase of a wide

<i>To enhance communication between physician and pharmacist for the patient benefit.</i>		PATIENT REFERRAL FORM
FROM: Pharmacist: Phone: Address:	ATTENTION TO: Doctor: Phone: Address:	
Regarding Patient/Customer:		I/C number:
<p>I'm concerned about the following problems and wish to call it to your attention:</p> <p>(i) Related to the patient's presenting signs/symptoms</p> <p>(ii) Related to the patient's medication use</p> <p>(iii) Related to the patient's factors:</p>		
<p>I Recommend:</p> <p>☐ Further assessment & examination</p> <p>☐ Need additional therapy:</p> <p>☐ Resolve the drug related problem</p> <p><i>Please contact me as soon as possible, so we can provide the best care possible to the patient.</i></p> <p><i>Thank You</i></p>		

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Figure 3.
Referral form.

range of vitamins, supplements, and healthy foods in the state of being away from the CPs. Consequently, the event shall make the CPs' role becoming smaller in the healthcare system. The CPs shall not have the chance to ensure whether the people are accessible to the products, which are safe, effective, indicative, and cost-effective. For that reason, it is essential to impart knowledge to the people as how to operate the digital culture in a skillful manner. In the scenario, they should integrate the CPs as their healthcare partner to improve their behaviors and be back to the

right choice of treatment. However, at first, the people must possess favorable confidence and trust with the CPs' ability to do something well.

Socioeconomic level: It relates to or concerns with the interaction of social and economic factors toward the action of consenting to something offered. An earlier study gives a practical exhibition and explanation of significant relationship between buying behavior and income level [36]. Nonetheless, the people might think carefully about buying medications, typically during the global financial crisis when they are more cautious to spend money [36]. At this moment, the people shall try to find cheaper medications by looking or otherwise seeking carefully and thoroughly using the search engine in the internet. Such course action is danger because they shall have the access to a product that is not officially indexed in the local health directory. The product might possibly harm their health status and even worsen it, which can cause unwanted side effects. Therefore, it is advisable that they enhance their direct involvement with the CPs as a prospective approach to make sure a problem does not occur.

Attitude: The people shall have their own settled way of thinking or feelings about something to accept or reject as desired. Sometimes, their thinking or feelings are made known through the position of their body, which indicates a particular mental state. For example, if the customers have a particular belief or idea about the benefits of a specific service, they might possess a strong desire to make use of it. Otherwise, they shall irresponsibly withdraw themselves from the situation to search for another act of assistance, which is able to carry out the role as expected. Therefore, it is critical to ensure that the CPs indulge themselves with the facts, information, and skills acquired through experience or education as the way to cause the people to believe firmly in the truth of the CPs' competence to counsel them [37]. The CPs should also make alterations to their way in which one acts or conducts oneself, especially toward the interaction with their customers. They must always be in the position to give professional help and advice to someone to resolve his or her medical and medication problem regardless of unfavorable reasons. Some of the unfavorable reasons are the CPs do not have time to interact with the customers or they are busy with the management operation. This standpoint of action shall have an effect on the character, development, or behavior of the customers toward the CPs and their extended services.

Trend: It is a general direction in which something is developing or changing as the process of becoming better suited to its surrounding or condition. In the modern era, a digital marketing has grown to be a considerable medium, in which the people can purchase products or services, compare the prices, and justify their values if they satisfy their desire [38]. Today, there are some favorable mediums, which ease the people to pay close attention to the digital era such as Facebook, YouTube, Instagram, and WhatsApp. The mediums are having a strong effect on the people's feelings or thoughts because they make sure the people can have the access to the information within a second. Also, the people can avoid the need to use the money on unnecessary transportation cost since they can have the products in front of their doors. Foremost, the digital marketing can save time particularly among the people who live in the urban area. They do not have to drive a car to purchase a product and have themselves in a very slow-moving traffic, caused by roadworks, an accident, or heavy congestion. Therefore, a digital marketing shall become a favorable way of business strategy to ensure the products or services are available near to the customers. For that reason, the CPs must take the challenge to change their way of practice and pay particular attention to the digital marketing as a prospective approach to interact with the customers. Otherwise, the people shall deliberately cease to think of the CPs as a healthcare provider in the healthcare system.

Personality: It is the combination of characteristics or qualities that form an individual's distinctive character, behavior, and habit. Personality is critical in the marketing strategy because it has the potential to influence other people to possess favorable or unfavorable thinking or feeling of the services offered [39]. For example, the people might have confidence and trust with the CPs who allow their charisma, character, and competence to be visible as the way to instigate the power of attraction. Their strength of charm personality shall have an effect on the character, development, or behavior of the people to possess favorable feelings of the products and services offered. For that reason, the CPs must ensure that they have the quality, characteristic, or feature that have the potential to enhance a pleasing personality in the eyes of the customers. The CPs can begin to possess such personality by improving their education and experience. Most of the time, the people are having confidence to interact with the CPs who are competence to help them to achieve their goals. That is the main reason behind the favorable feelings among the people toward the physicians because the physicians are able to possess a strong personality in their practice.

Experience: It is the knowledge or skill acquired by a period of practical experience of something, especially which is gained in a particular profession, situation, education, or events. It has the possibility to influence the character or behavior among the people to accept or reject the products or services offered [40]. For example, the people who possess better health quality of life after presenting at a specific counseling shall have themselves to visit the premise again or more than once. Also, they shall take the necessary action to support or actively encourage other people to have the same experience. Such course of action is a free notice or announcement in a public medium. However, the CPs must make themselves ready or able to perform a high standard of practice. For that reason, the CPs should gain or acquire knowledge or skill in related services by study, experience, or being taught. Hopefully, it can open the eyes among the people to the CPs' role as a medication protector in the healthcare system.

Perception: This factor is potential having an influence on the behaviors among the people to possess favorable or unfavorable feelings of something offered to them. The people shall weigh-up the values of the product or service and transform their findings into either satisfactory or unsatisfactory perception. Therefore, many companies are willing to spend millions of dollars to ensure their products shall reflect acquiescence perception to the customers' senses. In the healthcare context, the CPs must always make better of their services to catch the attention among the people to notice them or their services as interesting or important [37]. The CPs must intensify, increase, or further improve the quality, value, or extent of their knowledge and skills so that they shall have the chance to demonstrate the truth or existence of something by evidence or argument. Optimistically, with hope, it can possibly enhance the image of CPs as a prospective healthcare provider in the healthcare system.

Self-care treatment has become a general direction in managing health among the people in many countries [41]. It is defined as the art of practice, in which the people take their initiative to perform self-diagnosis and start to self-medicate as the way to improve their health status [41]. The entire process is danger to put in the picture because the people are not competence to act as a physician or a pharmacist. As a consequence, they might have the access to a medication, which is not safe, effective, indicative, and cost-effective. Therefore, it is critical to encourage the CPs to perform or undergo the first part of being a medication protector by possessing a particular ability to make an accurate triage action plan for the self-care customers [42]. Nonetheless, the course of action is having the chance to put in the picture if the CPs have a strong feeling to employ a structured and systematic approach

known as “STARZ-DRP” as a possible *modus operandi* [41]. This tool used in the earlier studies determines its feasibility to help the CPs to triage the customers with minor ailments [5]. The study reveals that majority of the customers who visit the selected pharmacies are not appropriate candidates for self-care treatment [5]. At most, the CPs convince them to seek the physicians for further medical examination [5]. The study makes known that the CPs are having the chance to give a practical exhibition and explanation of using the “STARZ-DRP” model as the way to help the people to self-medicate in a proper manner [5]. Such course of action can improve the character, behavior, or habit among the people toward the CPs and their extended services.

“STARZ-DRP” is brought to attention of the general practitioners (GPs) in an earlier study, and they have pointed out their favorable perceptions as notified below. In general, the GPs mark “STARZ-DRP” as a potential tool to magnify the image of CPs as a medication protector in the healthcare system.

“I fully agree with the use of STARZ-DRP as a structured and systematic approach to assist the community pharmacist to make triaging decision. There need to be guideline for the pharmacist and they should only dispense medication prescribed by a GP/Physician” (GP2).

“The above answers are the usual questions and asked to every patient during consultation. It is important and essential that these questions are put forward clearly to every patient and stress to them the danger and consequences” (GP4).

“Pharmacist should use this structured and systematic approach during consultation” (GP5).

“Easy to remember. Good” (GP6).

“A good mnemonic in approaching systematically” (GP7).

“Excellency” (GP8).

“It is a good approach for pharmacists to deliver consultation” (GP10).

“It is a good guide for the prescriber to assess patients’ need. Easy to remember” (GP11).

“Helpful in remembering the 2 components of the tool” (GP12).

“It would be very helpful in view of education of patient and problem solving for beneficial of patient” (GP13).

“All are essentials in relative patients” (GP14).

“It’s a good idea, pharmacist and doctor can work together” (GP15).

“Very useful tool for community pharmacists” (GP16).

“Excellent” (GP17).

“Useful easy to remember” (GP18).

“Useful guide for community pharmacist. If a person requests for a prescription drug, the pharmacist should ask for a doctor’s prescription, without, which the person should be asked to see a doctor” (GP20).

The study also determines the CPs’ point of views of “STARZ-DRP” and their responses are disclosed below.

“STARZ-DRP approach would greatly assist the community pharmacy in arriving at a certain decision based on an informed assessment. This would lead to the correct and specific prescription to the patients” (CP1).

“A very systematic and useful tool for CP to identify the health problem” (CP2).

“Community pharmacy is a gate door for public before seeking for a doctor. Some people may wish to avoid from physician counseling fee and seek for medication from community pharmacy. Thus, the STARZ-DRP can be standardized in all community pharmacy practice to reduce the medication-related problem and improve the quality of life” (CP3).

“It is a very systematic way and essential steps in getting information from customer. The questions are important for a pharmacist to make a decision/conclusion on the problem/issue. Data analyzing is crucial in determining the right medication for our

patients. It ensures we do not provide the same therapy, same medicines, etc. The STAR model ensures a pharmacist does not leave/forget vital questions in prognosing/deciding on medication" (CP6).

"STARZ-DRP is very important and essential for a pharmacist" (CP7).

"This is a complete tool for the patient assessment. The questions stated in this tool is essential and useful to figure out patient complaints and drug-related issues. Hope you will be inspiring us with your innovative thinking for years to come. Well done" (CP8).

"Very useful" (CP10).

"Easily understood and highly clear-cut" (CP11).

"This pharmacy self-care advice form is very useful for a pharmacist to sort out what questions should we ask before dispense medication to patients" (CP13).

"Very useful in CP's practice. Simple and easy to use. Essential in helping CP to identify underlying causes of some chronic complicated cases. Useful in helping CP to decide proper and correct treatment for patients. Essential for CP to identify possible drug-drug or drug-disease interaction. Easy to use for CP to identify all DRPs" (CP16).

"Structured and systematic format to help pharmacist in consultation with customers/patients at community setting" (CP17).

"These questionnaires are very tool to determine the patient can be treated by pharmacist or need to refer to doctor. Also, can detect other factors that could contribute to the illness" (CP18).

"Can be implemented as a standardized tool" (CP19).

"STARZ-DRP is essential in order to give best service to community" (CP24).

"Good approach" (CP26).

"The mnemonic STARZ-DRP is very essential to get a better treatment target" (CP27).

"Prior to this, I never get attention to this, now you fellows highlight its importance in a pharmacists' duty, the mnemonic is concise and deep in its objective, this will render a further understanding and put more interest in practice as a pharmacist" (CP28).

"Easy step to step to access patient. Structural. No point left" (CP29).

"Comprehensive good approach when need to refer to the doctor" (CP31).

"It seems focused type of questions in collecting patient information" (CP32).

6. Conclusion

As a conclusion, it is critical to understand the character, behavior, or habit of the customers toward the CPs and their extended services. The CPs must take the chance to analyze the possible factors which might have an effect on the customers' features and establish a strategy to enhance their favorable behavior to the services offered. They shall begin to possess the strategy by having a basic skill to help the people who have a desire to self-medicate. "STARZ-DRP" shall be acknowledged as the basic skill, which each pharmacist should learn thoroughly. Hopefully, the tool shall enhance the CPs' confidence and competence to interact with the customers in the community pharmacy settings. In addition, it shall empower the strength of personality among the CPs in the healthcare system. As a result, the customers shall possibly pay particular attention to the services offered.

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Conflict of interest

All authors declare no conflict of interest in the study.

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References

- [1] Dawn AG, Lee PP. Patient satisfaction instruments used at academic medical centers: Results of a survey. *American Journal of Medical Quality*. 2003;**18**(6):265-269
- [2] Tsuyuki RT, Beahm NP, Okada H, Al Hamarneh YN. Pharmacists as accessible primary health care providers: Review of the evidence. *Canadian Pharmacists Journal*. 2018; **151**(1):4-5
- [3] van Hoof JJ, Cents MH, Megens NM, van der Tang SJ. Druggists and pharmacists as gatekeepers: Sales routines and compliance with sales protocols for over-the-counter naproxen 275 mg medicines in the Netherlands. *Health Policy*. 2014;**117**(3): 353-360
- [4] Curley LE, Moody J, Gobarani R, et al. Is there potential for the future provision of triage services in community pharmacy?. *Journal of Pharmacy Policy and Practice*. 2016;**9**:29
- [5] Nordin N, Sarriff A, Hassali MA. STARZ-DRP: A tool for pharmacy triage services. *Asian Journal of Pharmaceutical and Clinical Research*. 2017;**10**(10):151-157
- [6] Nordin N, Hassali MA, Sarriff A. A global picture of extended pharmacy services, perceptions, and barriers towards its performance: A systematic review. *Asian Journal of Pharmaceutical and Clinical Research*. 2017;**10**(11): 417-427
- [7] Laliberte MC, Perreault S, Damestoy N, et al. Ideal and actual involvement of community pharmacists in health promotion and prevention: A cross-sectional study in Quebec, Canada. *BMC Public Health*. 2012;**12**:192
- [8] Warchal S, Brown D, Tomlin N, et al. Attitudes of successful candidates of supplementary prescribing courses to their training and their extended roles. *The Pharmaceutical Journal*. 2006;**276**: 348-352
- [9] Scheerder G, De Coster I, Van Audenhove C. Pharmacists' role in depression care: A survey of attitudes, current practices, and barriers. *Psychiatric Services*. 2008;**59**:1155-1161
- [10] Poudel A, Khanal S, Kadir A, et al. Perception of Nepalese community pharmacists towards patient counseling and continuing pharmacy education program: A multicentric study. *Journal of Clinical and Diagnostic Research*. 2009;**3**:1408-1413
- [11] You JH, Wong FY, Chan FW, et al. Public perception on the role of community pharmacists in self-medication and self-care in Hong Kong. *BMC Clinical Pharmacology*. 2011;**11**:19
- [12] Rayes IK, Hassali MA, Abduelkarem AR. Perception of community pharmacists towards the barriers to enhanced pharmacy services in the healthcare system of Dubai: A quantitative approach. *Pharmacy in Practice*. 2015;**13**(2):506
- [13] Sadek MM, Elnour AA, Al Kalbani NMS, et al. Community pharmacy and the extended community pharmacist practice roles: The UAE experiences. *Saudi Pharmaceutical Journal*. 2016; **24**(5):563-570
- [14] Al-Wazaify M, Albsoul-Younes A. Pharmacy in Jordan. *American Journal of Health-System Pharmacy*. 2005;**62**: 2548-2551
- [15] Wong FYY, Chan FWK, You JHS, et al. Patient self-management and pharmacist-led patient self-management in Hong Kong: A focus group study from different healthcare

professionals' perspectives. *BMC Health Services Research*. 2011;**11**:121

[16] Yamamura S, Yamamoto N, Oide S, et al. Current state of community pharmacy in Japan: Practice, research, and future opportunities or challenges. *The Annals of Pharmacotherapy*. 2006; **40**(11):2008-2014

[17] Saira A, Mohamed Azmi H, Mohamed Izham MI, et al. The role of pharmacists in developing countries: The current scenario in Pakistan. *Human Resources for Health*. 2009;**7**:54

[18] Fang Y, Yang S, Zhou S, et al. Community pharmacy practice in China: Past, present and future. *International Journal of Clinical Pharmacy*. 2013;**35**(4):520-528

[19] Malangu N. The future of community pharmacy practice in South Africa in the light of the proposed new qualification for pharmacists: Implications and challenges. *Global Journal of Health Science*. 2014;**6**(6): 226-233

[20] Berbatis CG, Sunderland VB, Joyce A, et al. Enhanced pharmacy services, barriers and facilitators in Australia's community pharmacies: Australia's National Pharmacy Database Project. *The International Journal of Pharmacy Practice*. 2007;**15**(3):185-191

[21] George PP, Molina JAD, Cheah J, Chan SC, Lim BP. The evolving role of the community pharmacist in chronic disease management—A literature review. *Annals of the Academy of Medicine, Singapore*. 2010;**39**:861-867

[22] Egorova SN, Akhmetova T. Pharmaceutical counseling: Between evidence-based medicine and profits. *The International Journal of Risk and Safety in Medicine*. 2015;**27**(Suppl 1): S87-S88

[23] Rayes IK, Hassali MA, Abduelkarem AR. The role of pharmacists in

developing countries: The current scenario in the United Arab Emirates. *Saudi Pharmaceutical Journal*. 2015;**23**: 470-474

[24] Hoti K, Hughes J, Sunderland B. An expanded prescribing role for pharmacists—An Australian perspective. *The Australasian Medical Journal*. 2011;**4**(4):236-242

[25] Salim AM, Elgizoli B. Exploring self-perception of community pharmacists of their professional identity, capabilities and role expansion. *Journal of Pharmacy Practice and Research*. 2016;**5**(2):116-120

[26] Ahmad A, Hugtenburg J, Welschen LMC, et al. Effect of medication review and cognitive behaviour treatment by community pharmacists of patients discharged from the hospital on drug related problems and compliance: Design of a randomized controlled trial. *BMC Public Health*. 2010;**10**:133

[27] Rayes IK, Abduelkarem AR. A qualitative study exploring physicians' perceptions on the role of community pharmacists in Dubai. *Pharmacy in Practice*. 2016;**14**(3):738

[28] Carrasco I. Which Factors Influence Consumer Behaviour? *Integria IMS*. 2018. Available from: <https://integriaims.com/en/factors-influencing-consumer-behaviour/> [Accessed: January 17, 2019]

[29] Neiss MB, Leigland LA, Carlson NE, Janowsky JS. Age differences in perception and awareness of emotion. *Neurobiology of Aging*. 2007;**30**(8): 1305-1313

[30] Lawton MP, Kleban MH, Rajagopal D, Dean J. Dimensions of affective experience in three age groups. *Psychology of Aging*. 1992;**7**(2):171-184

[31] Mroczek DK, Kolarz CM. The effect of age on positive and negative affect: A developmental perspective on

happiness. *Journal of Personality and Social Psychology*. 1998;75(5):1333-1349

[32] Labouvie-Vief G, DeVoe M, Bulka D. Speaking about feelings: Conceptions of emotion across the life span. *Psychology of Aging*. 1989;4(4):425-437

[33] Isaacowitz DM, Wadlinger HA, Goren D, Wilson HR. Is there an age-related positivity effect in visual attention? A comparison of two methodologies. *Emotion*. 2006;6(3): 511-516

[34] Mather M, Canli T, English T, Whitfield S, Wais P, Ochsner K, et al. Amygdala responses to emotionally valenced stimuli in older and younger adults. *Psychological Science*. 2004; 15(4):259-263

[35] Wikiversity. Digital Culture. 2018. Available from: https://en.wikiversity.org/wiki/Digital_culture [Accessed: January 18, 2019]

[36] Jenefa L, Kumar RM, Kadyan JS. Socio-economic factors influencing the buying behaviour with special reference to selected garment retail outlet in Chennai. *International Journal of Business and Management Invention*. 2013;2(12)

[37] Hassali MA, Nordin N, Sarrieff A, Saleem F. Community pharmacy marketing in the new era: A global picture of extended community pharmacy services. *IntechOpen*; 2018. pp. 131-149. <http://dx.doi.org/10.5772/intechopen.74326>

[38] Harneet D. Growing and changing trends in consumer behaviour. *Biz and Bytes*. 2017;8(1):50-53

[39] UdoImeh PT, Awara NF, Essien EE. Personality and consumer behaviour: A review. *European Journal of Business and Management*. 2015;7(18):98-106

[40] Essays, UK. Importance of Consumer Behaviour. 2013. Available from: <https://www.ukessays.com/essays/marketing/importance-of-consumer-behaviour-to-business-managers-marketing-essay.php?vref=1> [Accessed: January 18, 2019]

[41] Bell J, Dzieka G, Pollack C, et al. Self-care in the twenty first century: A vital role for the pharmacist. *Advances in Therapy*. 2016;33:1691

[42] Sarrieff A, Nordin N, Hassali MA. STARZ-DRP: A step-by-step approach for pharmacy triage services. *Malaysia Journal of Pharmacy*. 2011;1(9):311-326

[43] Holland R. When to refer. *Pharmaceutical Society of Australia*. 1993:15