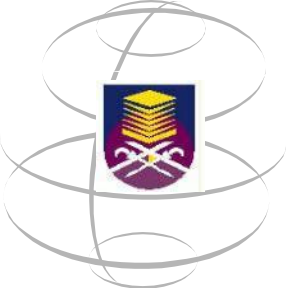


**UNCONTROLLED TYPE 2 DIABETES IN MALAY
PATIENTS IN MALAYSIA: CAN PHARMACISTS HELP?**



Salmiah Mohd Ali (B. Pharm, PhD)
Faculty of Pharmacy, Universiti Teknologi MARA,



INTRODUCTION

Chronic disease of Diabetes

- High prevalence of diabetes
- Afflicting approximately 150 million people worldwide and WHO estimated the number will increase to 300 million by year 2025¹.
- Total health care spending on the disease worldwide is estimated to be US\$ 213 billion and US\$ 396 billion by year 2025².
- 75% to be from developing countries because of rapid cultural and social changes and also increasing urbanisation^{3,4}.
- With this scenario, diabetes will burden the health care system, which is already strained with other chronic diseases such as coronary heart disease, asthma, hypertension, and kidney failure⁵.

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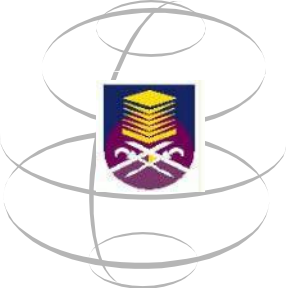
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INTRODUCTION

- Adequate blood glucose control is **vital** in diabetes management to prevent complications.
- Yet, despite the various interventions, diabetes control **remains a global problem** to health care professionals (HCPs).
 - As more people suffer from diabetes due to the **increase in the level of obesity worldwide**
 - Uncontrolled diabetes has led to an increase in **complications** and thus has doubled the **cost of treating** these patients.
 - Complications of diabetes have caused Malaysia to be ranked as number one in kidney failure due to diabetes ⁶.

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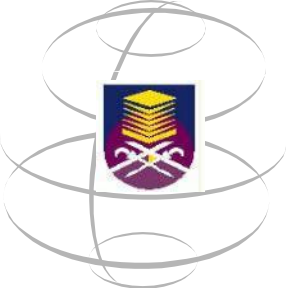
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- With the growing number of people diagnosed with diabetes, there is a need to understand **why the lack of control** among diabetes in Malaysia.
- This study **explored perspectives** and experiences of patients in managing chronic illness of Type 2 diabetes as they have to balance their blood glucose to prevent complications.
- To **provide recommendations** to enhance adherence to treatment and help patients to improve their self-management skills.

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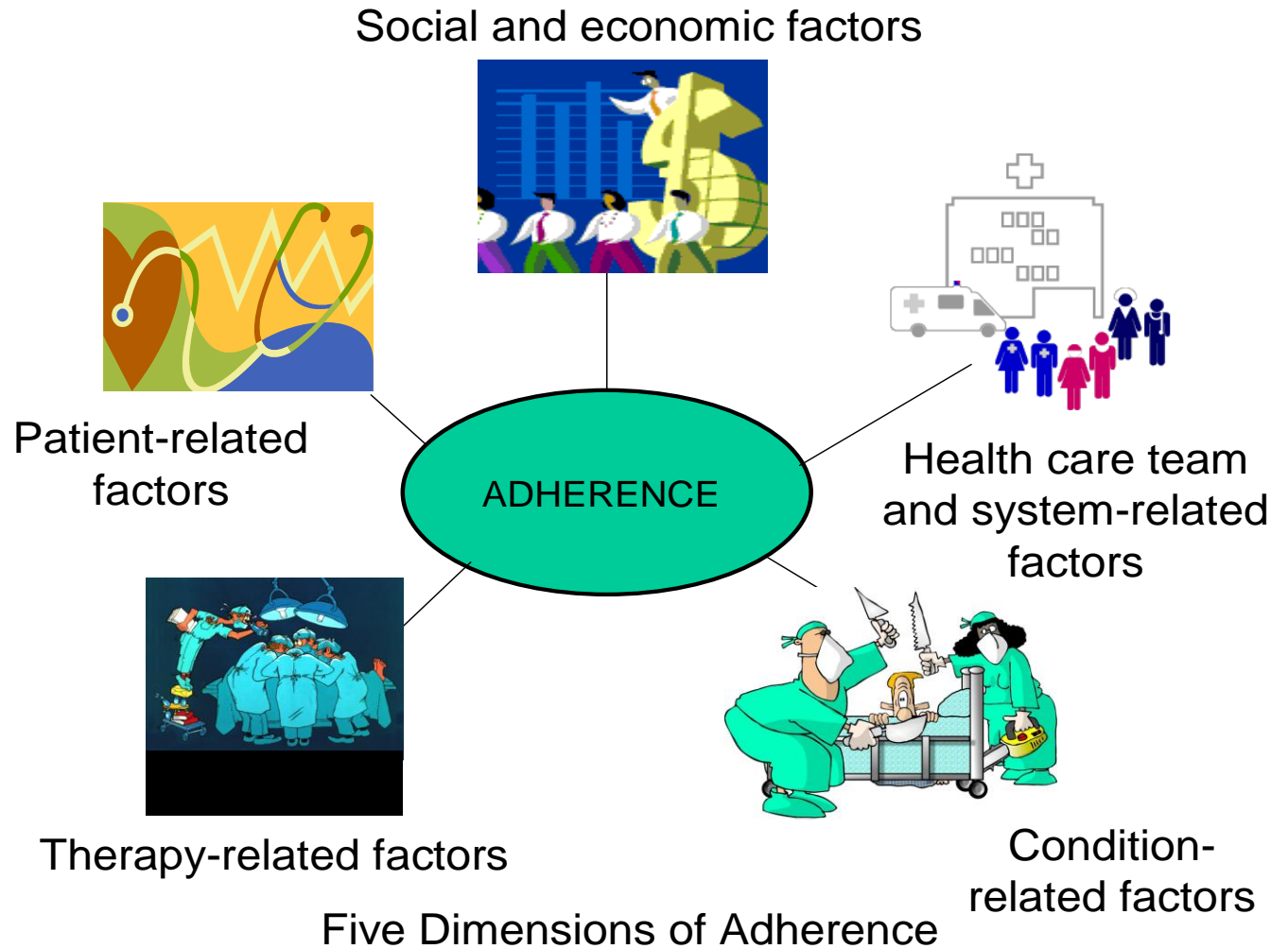
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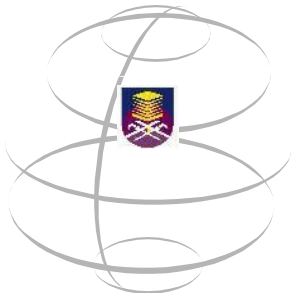
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MULTI-FACTORIAL ADHERENCE MODEL



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METHODOLOGY

- In-depth interviews were carried out on a purposeful sample of 18 Malay patients (15-75 years, 9 males and 9 females) and 13 health care professional (HCPs).
- Interviews were recorded, transcribed and audiotapes were analysed using NVivo software to identify emerging themes and code according to categories.
- The transcribed interviews were analysed thematically.
- Themes identified were categorised in terms of their beliefs and also the contributory factors raised during interviews.
- Themes included problems with integrating the treatment regimen and difficulty developing coping skills to achieve the desired blood glucose level.

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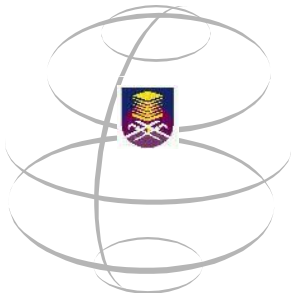
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RESULTS

- Themes that emerged from interviews with pharmacists included patients' problems with integrating the treatment regimen and difficulty developing coping skills to achieve the desired blood glucose level.
- Patients lacked knowledge about their medicines, dietary control, medicine taking, complexities of treatment, and side effects of medications.
- They needed to integrate many treatment requirements such as diet, medications, blood glucose monitoring and exercise into their daily routine posed problems.
- Other barriers such as ethnicity, beliefs (culture and financial) proved to be the constraints that limited their ability to good control diabetes.
- Education and knowledge related to diabetes that influenced understanding of the disease were also reasons for non-adherence to treatment regimen.
- According to pharmacists, patients' ethnicity and education level played a substantial role in their attitudes toward diabetes management.

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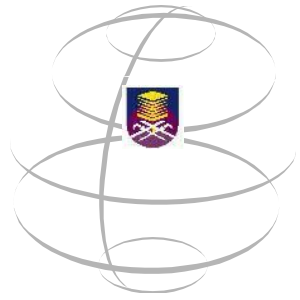
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RESULTS

- According to health professionals', patients' ethnicity and education level played a substantial role in their attitudes toward diabetes management.
- Their beliefs, cultural and social needs shaped their attitudes in controlling or compliance in treatment management.
- Patients were willing to discuss their problems about self-managing diabetes if some of these barriers were addressed during consultations.
- Many contributing factors are summarised as in the Adherence Model (Salmiah, MA, 2006).

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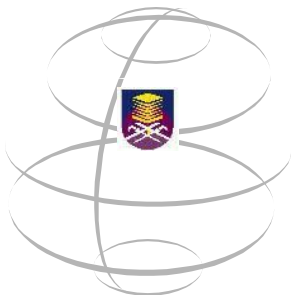
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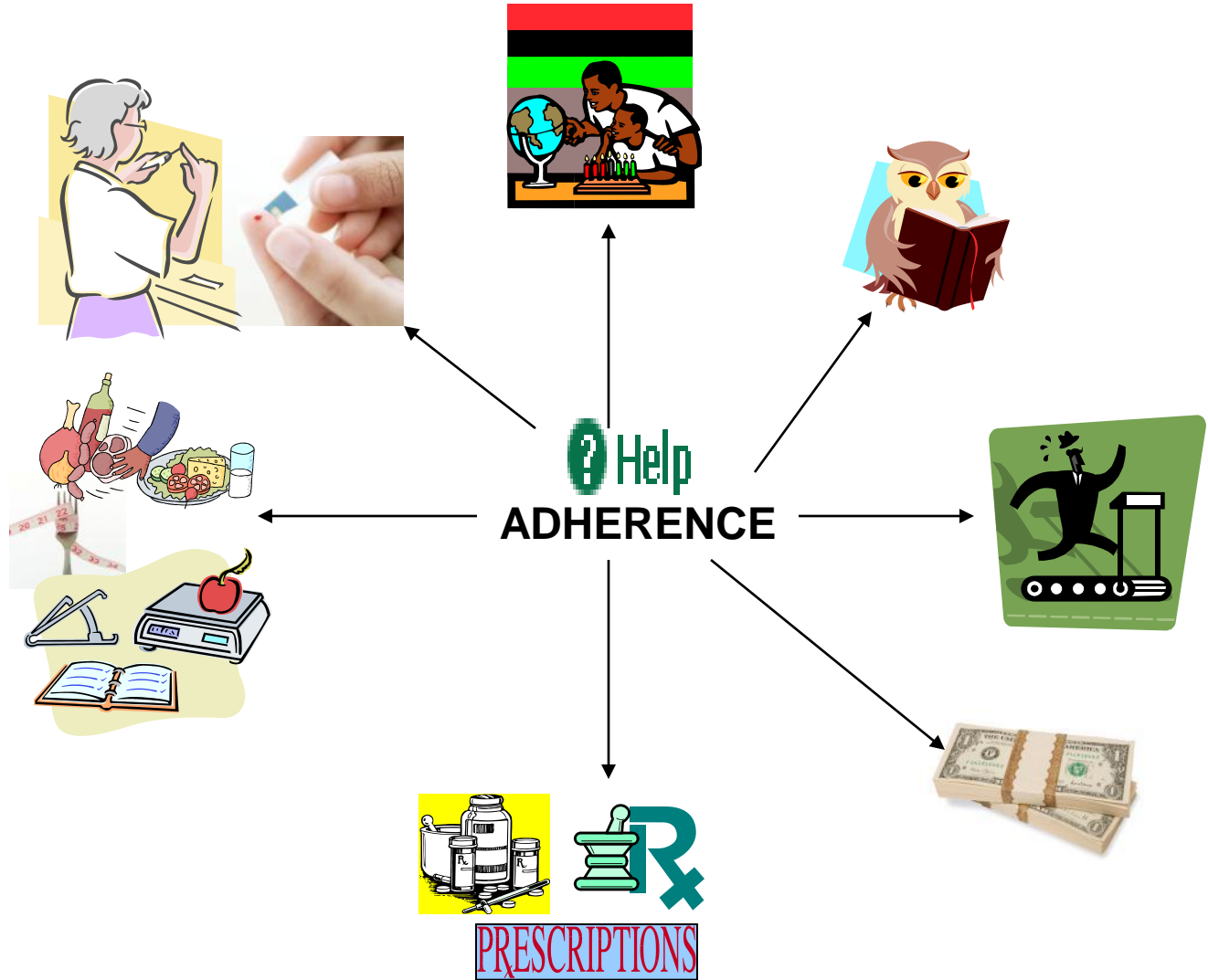
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CAN PHARMACISTS HELP?



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RESULTS

BELIEFS & EXPERIENCES

Patients lacked coping strategies were contributed to their beliefs and their experiences such as severity of symptoms. Pharmacist (H10) added that education level played an important role in diabetes management.

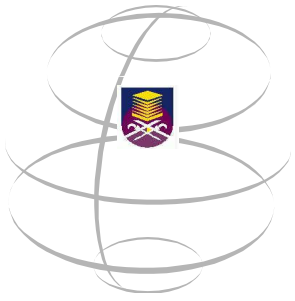
Emmm... modern educated ones. I don't think it would, but for those, very small...kampongs...village to a certain extent...to a certain extent but we try to let them see the picture in a very, very simple way.

H10

Cultural values also played a role in diabetes control as in a study by Ismail IS et al (2001) on ethnicity and glycaemic control. This was agreed by H10:

"Of course... culture brings down to dietary. Beliefs.. I don't think it is... maybe it is... I suppose in Malays...emmm... race influence beliefs in terms ..."I got this... there's nothing can be done"...

H12



RESULTS

However, pharmacist H10 believed that some patients needed some motivation to keep them going.

If possible we would actually think if there is someone who can motivate them...it would make some difference ...because some patients would think, "cannot (lah)"... they think they can't do it.

H10

H10, also agreed that some family members were concerned and showed great interest in helping the patients.

- As pharmacist, she added that patients' own initiatives were more important and would make a lot of difference to the care of diabetes.
- Sometimes, the patients' family members were interested to know more about diabetes and this posed problems to pharmacists when the counselling sessions took much of their time (H11).

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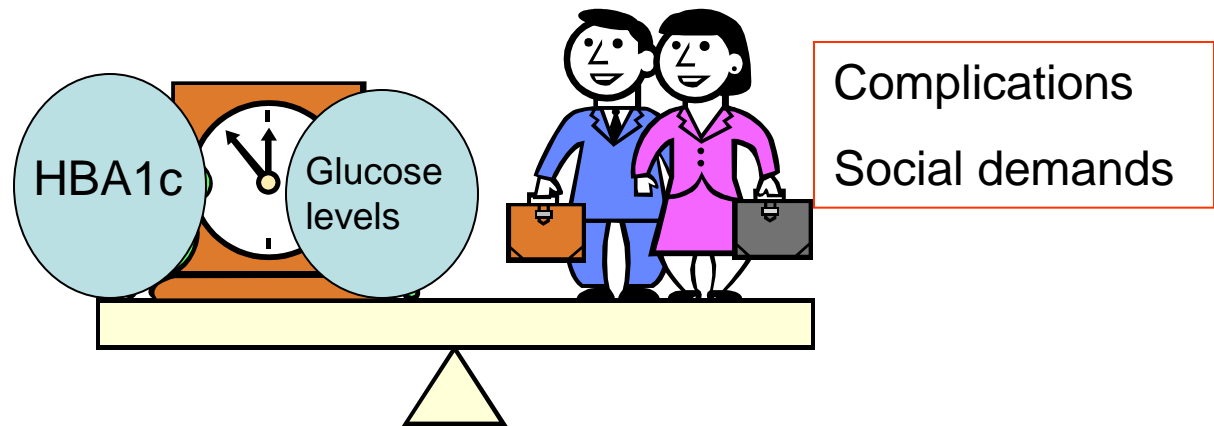


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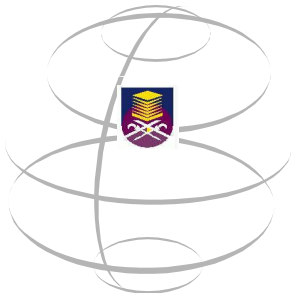
Difficulty in integrating the treatment regimen into their lifestyles e.g. exercise or food.

Diabetic education and patient counselling involved all aspects of the disease and could be time consuming. Counselling by pharmacists depended on how receptive the patients were towards the information and the education level (FIP, 2004).

H11: I have a file when I counsel them, visual aids...and it depends on their level of education.... and it depends on how they respond to me. I create contact with them first, and I feel they are interested and alert.



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RESULTS

- Besides communication problems during patient counselling, other factors such as injection phobia needed to be considered when patients were concerned with the type of treatment.
- *H12: This is more specific. If I know the patients have difficulty in injecting, ... sometimes they are afraid of needles. I will try to inject myself in front of them... to show it's not painful. That is one of the specific ones.*

- Sometimes patients needed tougher tactics to make them realise the threat of complications.
- *SMA: How do you overcome this perception or your strategies to prevent this?*
- *H12: Normally I just tell them if you stop then this is what you will face.*

“In pharmacy, we agree to have a common ground. These are the things that we have to tell them. We make sure we tell the people the same things. But sometimes it's quite difficult because a lot of the information doesn't get across....”

H10



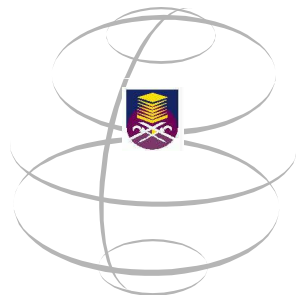
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A pharmacist, (H10), counselled the patients to make sure they really understood the medication prescribed to them.

Ok... I make sure they really understand. That's the ultimate aim... (By asking questions)" how do you take?" It's very simple. Just ask them how you take it. If they can't answer...they don't understand or they don't take.



- Visual aids and other techniques were used to help patients who were less educated in understanding the information given to them.
- Communication tools have a major influence on the depth of patient involvement in decision-making (Elwyn, Edwards and Kinnersly, 1999).
- Thus, how information is presented (verbal, tabular, graphical versions) helped patients become involved in the decision-making. With this approach, pharmacists viewed that their approaches to patient education differed from other health care professionals (Stevenson, 2001).
- *H10: ours.... the approach... it is different from them...even the leaflets we do it ourselves because we know what the patients need...we look into their needs...we think they should know this... and this...we do the leaflets ourselves.*



DISCUSSION

- Their beliefs, cultural and social needs shaped their attitudes in controlling or adherence to treatment management.
- Patients were willing to discuss their problems about self-managing diabetes if these barriers were addressed during consultations with the pharmacists.
- The complexity of diabetes requires patients to be aware of their disease and they must be educated to enhance their coping strategies and overcoming their stress of having the illness.
- Factors that contributed to the control of diabetes once identified could be used in management of diabetes and enhance treatment outcomes.
- Balancing hypoglycemia and hyperglycemia is a difficult task for most patients and health care professionals need to address the factors and treatment outcomes should be individualised.
- To comment on a pharmacist's responses regarding patients' family members who took a lot of her time during consultation: "Talking to the relatives of the sick is laborious, exacting, and time-consuming. It costs the service, whether national or private, money. But it is as much the delivery of health care as the prescribing of medication" (Sir Clothier, 1987, pg. 49). In this, as in so many aspects of human communication, listening is probably more important than talking.

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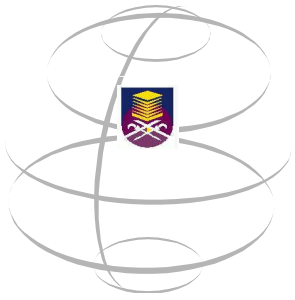
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RECOMMENDATION

- Patients reported better ability to practice diabetes care when they understood their disease better. Thus, pharmacists have a role to play by establishing more time to explain the disease with their patients.
- Pharmacists need to understand that the complexity of diabetes requires patients to be aware of their disease and they must be educated to enhance their coping strategies and overcoming their stress of having the illness.
- Balancing hypoglycemia and hyperglycemia is a difficult task for most patients, pharmacists and health care professionals need to address the factors and treatment outcomes should be individualised.
- Pharmacists and other health care professionals need to understand the problems patients had in controlling their diabetes especially their ability to balance the contributing factors and adherence to treatment requirement.

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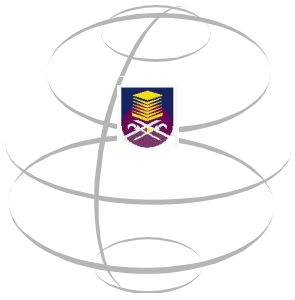
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CONCLUSION

Pharmacists role could enhance treatment outcomes and control of diabetes:

- By reducing some of the barriers faced by some patients as it was reported that they have better ability to practice diabetes care.
- As diabetes care is complex and requires great effort on the part of patients and pharmacists in controlling their blood glucose to acceptable levels.
- Factors that contributed to the control of diabetes needed to be identified in patients as treatment requirement is individualized in caring of diabetes patients.

Standard treatment approaches would help to minimise confusion among the patients during consultation with the pharmacists.

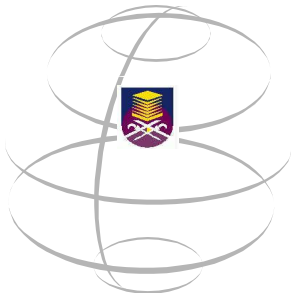
This would help patients tremendously so as they did not become confused with too much information that they have to digest.

Pharmacists working as interdisciplinary teams can positively impact glycaemic control in patients as in a study by Coaster-Senior et al (1998) which showed that blood glucose concentrations decreased significantly from baseline by 2.2%.

Pharmacists needed to be more visible in their role as part of the diabetes care team and other chronic diseases.



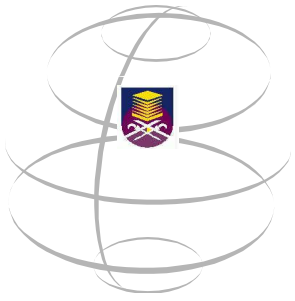
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CONCLUSION

- This study has uncovered the perceived beliefs of Malay Type 2 diabetes patients and their coping strategies and illness stress through qualitative research methods.
- Understanding patients' experiences and beliefs would help both the patients and pharmacists and other HCPs to identify areas of concerns and make recommendations for future treatment to enhance adherence to treatment of diabetes.
- Patients were willing to discuss their problems about self-managing diabetes if some of these barriers were addressed during consultations with pharmacists.
- Therefore more efforts should be generated to implement the forwarded recommendations in order to achieve more desirable diabetes control in Malaysia.

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