STRATEGY LITERATURE REVIEW

Health Topic:

Type 2 Diabetes Mellitus among Old Age People Over 65 Years in Australia

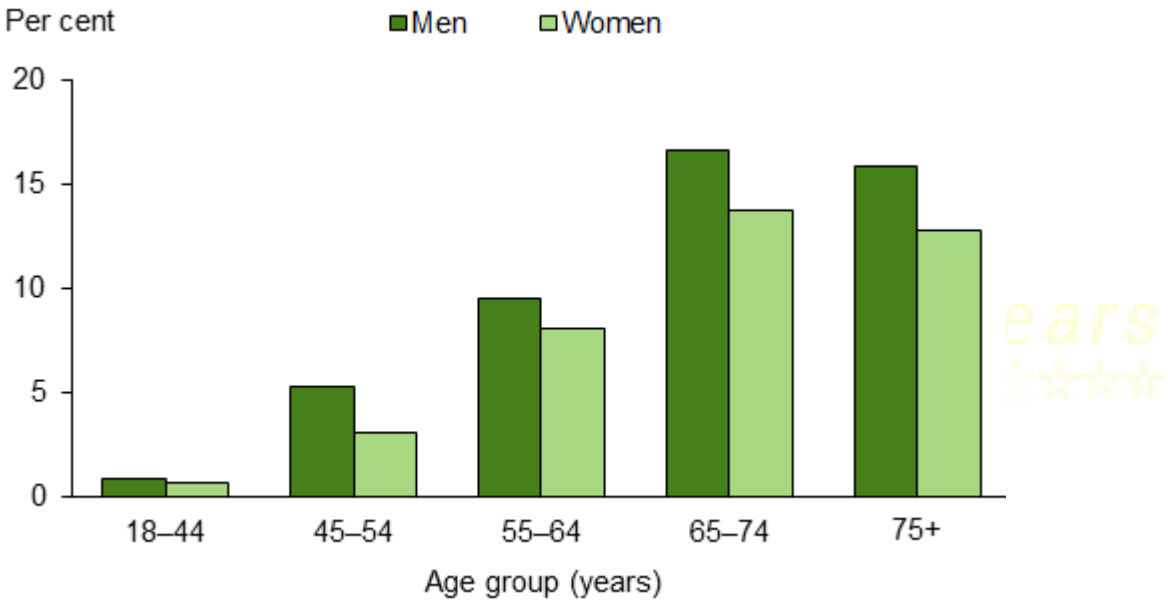
Contents

1. Introduction

Diabetes is a life-long ailment that impacts the glucose handing capacity in a person's body. It has been noted that Type 2 diabetes affects people in various age-groups all over the world. There were

reportedly 15% of people over 65 years of age who self-reported their diabetic condition (Figure 1), as per the ABS 2011–12 Australian Health Survey. Having said that, the report stated that there were an average of 849,000 adults above 18 years of age, who reported about their diabetic condition. According to the survey, the rate of reporting among Australian men (5.4%) is higher as compared to women (4.2%). This rate also varies according to the area of living. Like the reporting rate is found to be higher in inner regions (5.5%), while in major cities only 4.8% people report about their disease [12] [13] [14] [15].

Figure 1: Self-reported popularity of type 2 diabetes among adults in Australia, by sex and age, 2011–12



Source: AIHW analysis of ABS *Microdata: Australian Health Survey, Core Content—Risk Factors and Selected Health Conditions, 2011-12.*

The purpose of this literary review is to analyze a range of health promotion policies which have been implemented to enhance Type 2 Diabetes Mellitus treatment uptake. This literature review was drafted around a schema that studies the health promotion procedures on a critical approach to fuse concise data pertaining to the health promotion procedures, its validity in a specific topic, in the context of theories and constructs used. The methodology provides a brief outline of literature search and the justification for selection and exclusion of research articles. The result section provides a summary of the whole literature that analyses drive, background, theories, strategies, assessment and applicability in a specific health topic. An inclusion/exclusion methodology was applied. The review strategy discovered that the conventional approaches for reducing Type 2

Diabetes reporting rates were health awareness, provider-based methodologies and communication strategies.

2. Review

2.1 Methodology

This section defines the search strategy, choosing and exclusion criteria followed in this review and kinds of studies reviewed. An in-depth literature search has been conducted through library data bases with the help of different academic databanks. The articles included are randomized control tests, case studies, peer reviewed journals, case series and comparative analyses on the chosen health topic. The inclusion criteria was restricted to studies within last six years, studies conducted within Australia, and researches of academic and government health units. However, a few older studies have also been used.

The evaluative methods employed in this research included questionnaires. The participants included are adult male and female Indigenous population in Australia, who are over 65 years of age. A number of interviews were also conducted among people of this age-group, so as to understand how the people coped with this ailment. The interventions observed are culturally suitable services and policies applied in the Indigenous population. The health promotion strategy results evaluated on the basis of data contributed to better disease management, improved attitude of individual and family towards diabetes and better preventive strategies.

Electronic search results

The databases that will be electronically searched are: Science Direct, Online Library, The Medical Journal of Australia (MJA), PLOS, The New England Journal of Medicine (NEJM), Journal of Periodontology Online, American Journal of Epidemiology and Europe PubMed Central. Table 1 clearly shows the search methods and the text words used.

Table 1: Search Strategy

Name of Journal	Keyword 1	Keyword 2	Keyword 3	Keyword 4	Keyword 5
Science Direct	Type 2 diabetes mellitus	Type 2 diabetes mellitus in Australia	Type 2 diabetes mellitus in Australia in	Type 2 diabetes mellitus in Australia	Diabetes in Australian adults

			old people	above 65 years of age	
Online Library	Type 2 diabetes among Australians	Diabetes in Australians	Diabetic patients in Australia	Diabetic adults in Australia	
MJA	Diabetes in Australians	Diabetic adults in Australia	Type 2 diabetes in Australia	Diabetes in Australia	
PLOS	Diabetic patients in Australia	Type 2 diabetes among Australians	Type 2 diabetes		
NJEM	Australian diabetics	Australian adult diabetics	Diabetes in Australians		
Journal of Periodontology Online	Type 2 diabetes mellitus	Type 2 diabetes	Diabetes mellitus in adults		
Europe PubMed	Diabetes in Australia	Australian diabetics	Diabetes in Australian adults		
American Journal of Epidemiology	Australia type 2 diabetes mellitus	Type 2 diabetes mellitus	Type 2 diabetes mellitus in Australia		

Article Id	Brief description of strategy being evaluated (refer to 2B,2.1)	Theories, methods, constructs used(refer to 2B,2.1)	Strategy level (Individual, group, population)	Strategy context/ setting (refer to 2C)	Research question or purpose (refer to 2D,2.9)	Evaluation methods, measures and results(refer to 2D,2E,3)	Interpretation with respect to quality and applicability to your project(refer to 4)	Level of evidence (I-IV)(refer to append1)	Ottawa charter action area
(1) Sazlina SG, 2015	To boost physical activities and exercise among old people with type 2 diabetes	Provider medical education	21 suitable studies were reviewed	Community setting	Does physical activity beneficial in reducing type 2 diabetes among older	Increased level Physical activity has been proven a beneficial strategy	Showed an improvement in managing type 2 diabetes mellitus	1	OC 1

	mellitus				people?				
(2) Tuomilehto et al., 2011	Lifestyle changes can reduce type 2 diabetes mellitus	Provider education	110,660 individuals tested for glucose tolerance	Old age Population with type 2 diabetes mellitus	Does lifestyle changes like reduced alcohol intake, increasing physical activities, weight loss etc. help in reducing type 2 diabetes mellitus?	Observational studies have provided firm evidence that multiple lifestyle-related factors either increase or decrease the risk of type 2 diabetes.	People changed their life style to reduce type 2 diabetes mellitus	1	OC 1
3) Post et al, 2012	There is a link between intake of dietary fiber and diabetes type 2	Group education	15 Appropriate studies have been randomly selected to complete the test	Type 2 diabetic old age Population	How beneficial it is to increase the intake of dietary fiber to reduce the type 2 diabetes?	An intervention on including fiber supplementation for type 2 diabetes mellitus can lessen fasting blood glucose and HbA1c.	The project shows that intake of supplementary fiber help the people to reduce the fasting blood glucose	111-2	OC 1
(4) Rizvi, 2009	Nutrition and food related education for old age diabetic patients	Group education	Old age population	Community setting	What is the true connection between the nutritional diet and type 2 diabetes mellitus among old age patient?	Diet with good amount of fruits, vegetable, milk and dairy products showed excellent results in managing type 2 diabetes	The project identified how the dietary patterns help to manage the type 2 diabetes mellitus	1	OC 1
(5)	Improved	Provid	Old	Comm	How	Glycemic	Increased	11	OC

Wallace, 2015	glycemic control reduces the risk of microvascular disease in diabetic patients	er education	age population	unity setting	microvascular disease among diabetic patients can be reduced with increased glycemic control	control is an excellent method to control microvascular disease in type 2 diabetic patients	glycemic control reduces the risk of microvascular disease among old age people		4
(6) Omar and Lai, 2014	Medication adherence among type 2 diabetes mellitus patients above 65 years of age	Provider education	147 diabetic patient have been randomly selected	Community setting	How many people are aware of their medication while having diabetes?	53.7% of total participants were found to be aware of their medication and illness	This study identified among 147 diabetic patients53.7% people were aware of their medication and illness	111-2	OC 3
(7) Nice, 2011	Changing health-concerned behavior	Health education	Old age people with type 2 diabetes mellitus	Old age Population	If a person changes his/her health-related behavior, how much helpful it is in managing the illness?	Results show that positive attitude towards the health-issue helps to manage the problem with ease	Positive attitude of the people help to manage the problem	1	OC 1
(8) Abrahim, 2015	Self-care among type 2 diabetes mellitus patients	Group education	31 suitable studies have been reviewed	Diabetic population	How much helpful is self-care for managing type 2 diabetes mellitus	To improve a Type 2 DM patients self-care activities the present study concluded that	The study shows that self-care activities can manage type 2 diabetes mellitus		OC 2

						Demographic, Socio-Economic and Social support factors are among the positive contributors in patients of Type 2 DM successful Self-Care activities.			
(9) Hovanec et al, 2012	Resistance training	Provider education	Controlled clinical trials and literature review	Health care facility	How helpful is strength and resistance training in controlling type 2 diabetes mellitus?	Resistance training increase muscle strength and increases metabolic rate that helps in managing diabetes and cardiovascular diseases	Resistance training leads to increased metabolic rate and that will help to manage diabetes mellitus		OC 4
(10) Tomas, 2015	Neurobiofeedback treatment for diabetics	Provider education	Diabetic population	Health care setting	How cognitive impairment in diabetics can be managed with neurobiofeedback?	Neurobiofeedback treatment help to reduce cognitive impairment in diabetic patients	This project shows that cognitive impairment in diabetic patient can be managed by neurobiofeedback	11	OC 3
(11) Carrar	Physical counsellin	Group educat	23 releva	Health care	How much personal	68.4% studies	It shows that	1	OC 2

o et al, 2015	g among old age diabetic patients	ion	nt studies have been reviewed	facility	counselling is beneficial for old age diabetic patients?	reviewed showed significant improvement among people taking physical counselling	counselling help the old age people to manage their diabetic in a better way.		
(12) Confos et al, 2003	Screening for diabetic retinopathy	Provider educated	Population: general practitioners	Health care facility	To enhance the knowledge of general physicians for diabetic retinopathy	Measured short term impact: general physicians have showed good knowledge about retinopathy after the study	This study evaluate the knowledge of the general practitioners about the diabetic retinopathy		OC 4
(13) O'Brien and Chandra Mohan, 2003	Education campaign on good diabetic foot examination	Promotion, provider educated	Population: health care practitioners and patient with diabetes type 2	Health care facility	To increase compliance with the performance of a proper foot examination through a predominantly physician-directed campaign	With minimum cost, time and investment; the documentation of diabetic foot can be implemented. Moreover, follow-ups of foot checkup can be reminded	Education campaign has been done by the health practitioners about the importance of diabetic foot examination		OC 4
(14) Peters and Davidson, 1995	Support from subspecialists for diabetic patients	Group education, environment &	Diabetic patient	Health care facility	To avoid complications and hospitalizations of diabetic	Hospitalization rates dropped significantly	Support from the subspecialists to the diabetic		OC 2

		policies			patients		patients help to reduce the complication and hospitalization		
(15) Sandy, 2005	Poster campaign to check diabetes	Campaign & promotions	Diabetic patients	Health care facility	To encourage people to get their glucose level checked on time	The population of people going to hospitals for getting their glucose level checked, increased tremendously	Through Poster campaign people going to the hospital for getting their glucose level checked increased significantly.		OC 4

Table2: Search Strings used

1	(old age) AND (diabetes)AND (type 2) OR (statistics)		
2	(elderly) OR(Australia) OR (type 2 diabetes)		
3	(elderly)AND (diabetes) OR (Statistics)		
4	(old people) AND (culture) AND (type 2 diabetes)		
5	(elderly) And (“common effects”) AND (diabetes)		
6	(over 65 years) AND(Prevalence) OR (diabetes)		
7	(“Health policies”)AND (elderly)AND (diabetes type 2)		
8	(“elderly citizens”)AND(effects)AND(“diabetes”)		

9	(Prevalence)AND(“diabetes type 2”)AND (elderly)		
10	(“Health policies”) And (“diabetes type 2 management”)And (Australia)		

3. SUMMARY:

It is still unclear as to what causes type 2 diabetes [(1)]. Type 2 diabetes also provides strong genetic in addition to spouse and kids related risk factors [(2)]. This review laid emphasis on literature in context of reducing the occurrence of type 2 diabetes among people over 65 years of age in Australia to minimize the risk of the health condition through culturally appropriate health and social welfare policies. From the extensive volume of materials that were studied for the purpose of this research, 15 peer reviewed articles (the most relevant) were chosen, and the review spanned across different themes.

Later on it was reviewed that diabetic patients should change their lifestyle, increase intake of nutritional food and especially dietary fiber in order to cope with this condition. ([3)(4)(5)] Diabetes makes the bone very week and this increased the chances of fracture among older patients and many other complications. Hence diabetic patients should take care of their diet. In this paper, the relation between diabetes and kidney disease has also been reviewed [(4)(5)]. Diabetic patients of type 2 diabetes have been selected to examine CKD (chronic kidney disease) among them. The results were positive. [6,7]

It has also been observed that diabetes led to the failure of the treatment of worm infection. This study was conducted on older as well as middle aged people and showed the positive results [(8)].

However type 2 diabetes statistics in elderly indigenous population is a broader theme that has direct or secondary relationship with the national culture, life, values and beliefs. Only few researches discuss the effectiveness of a medico-pharmacological approach in the reduction of cases of type 2 diabetes in the elderly. A chunk of the literature suggests the need for holistic and environmental approach to decrease the number of cases. Some of the articles stressed on the change in lifestyle, which has a direct relationship with the high rate of type 2 diabetes in those above 65 years of age. Hospital and primary health articles were found beneficial in discussing various factors which could slow down the instances of type 2 diabetes.

Studies have also revealed that there is a close link between the occurrence of type 2 diabetes and the increasingly sedentary lifestyle of the citizens of Australia. Research has also proven that physical

inactivity, high blood pressure, high cholesterol levels, and the use of steroids could also be responsible for the increase in the cases of type 2 diabetes among citizens over the age of 65 years of age. Keeping in mind the alarming rates of diabetes occurrence among people of an older age group, it is necessary for the government to take the necessary steps to ensure that those rates are brought under control. Also, in order to cope with the current situation of diabetes among the elderly, it is necessary that there be provision for optimum healthcare facilities that can help the patients cope with the condition, without letting it affect their routine in a negative way.

4.Conclusion :

This strategic literature review focuses on the literature, the possible causes, and the effectiveness of current health policies in context of type 2 diabetes cases among people above the age of 65 years in Australia. Type 2 Diabetes Mellitus can be quite high in Australia. The state is at risk to an episode with critical diseases, and has any health marketing project to improve treatment in addition to management involving type several diabetes amid adults over 65 years of age. This report searched for current proof of health marketing strategies that have been used in the Australian in addition to International setting to face this difficulty. The research methodology involved an inclusion/exclusion criteria for getting data in addition to results were being analyzed having a public wellness interventions Schema as well as the Australian Center with regard to wellness promotion. Results indicate substantial evidence for political in addition to provider primarily based interventions [(9)]. Additionally, a clear link was observed between the instances of type 2 diabetes among the elderly and the increased inactivity, high blood pressure levels, high cholesterol levels and so on. Conversation techniques, like the growth involving trustful man relationships, were considered a crucial intervention for addressing health insurance and psychological limitations to diabetes. The findings on this review may be used to develop an ecological based mostly health marketing project for the Australian adults preceding 65 years [(10)].

However, the alarming rise in the cases of type 2 diabetes among the elderly in Australia is a warning bell for steps to be taken to ensure that this rise is curbed. Research has indicated that dietary and lifestyle changes could be used to bring the instances of this disease under control. Government initiatives such as workshops and other such educative media could be used to guide citizens as to how they can steer clear of this disease. Overall, the research was able to substantiate the belief that the rising incidence of type 2 diabetes in Australia was in fact linked to a number of dietary and lifestyle factors. It is necessary that dietary and lifestyle changes be made in order to bring these statistics within range again. Exercise must be made an integral part of the lifestyle of the patient. In

terms of diet, the patients must be educated to consume whole grains and fresh fruits and vegetables instead of processed, sugary foods.

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