

**Table 1. Study Characteristics**

Study	Study Type#	Participants Characteristics	Health condition	Health Condition Grouping	Number of Participants (Completed The Study)	Nutraceuticals Use*	Nutraceuticals Type	Factors	Study Quality
United States of America									
Arcury 2005 (Arcury et al., 2005)	Face-to-face interview; P	Community-dwelling rural elders (aged 70 and above)	NR	NR	145	Majority yes	General	a) Healthcare professional consultation b) Influence from mass media	7
Arthur 2012 (Arthur et al., 2012)	Face-to-face interview; P	Cancer patients	Cancer	Life-threatening	23	Majority yes	General	a) Safety b) Effectiveness	8
Blendon 2001 (Blendon et al., 2001)	Questionnaire; P	National representative sample of 18 years and older	NR	NR	1200	Majority yes	General	a) Effectiveness	2~
Blendon 2013 (Blendon et al., 2013)	Questionnaire; R	National representative sample of 18 years and older	NR	NR	1579	Majority no	General	a) Effectiveness b) Healthcare provider consultation	2~
Bruno 2005 (Bruno and Ellis, 2005)	Questionnaire; R	National representative sample of 65 years and older	Majority chronic	Majority chronic	5860	Majority no	General (Herbal therapy)	a) Effectiveness c) Healthcare professional consultation	2~
Caldentey 2013 (Caldentey	Questionnaire; P	Geriatric patients with normal cognitive	NR	NR	36	Majority yes	Specific (Multivitamins,	a) Healthcare professional consultation	0~

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et al., 2013)		functions (Mini Mental State Examination score more than 25)					Vitamin D, Calcium, Omega-3, Vitamin B)	b) Effectiveness	
Carlisle 2005 (Carlisle and Shafir, 2005)	Questionnaire; P	National representative sample of 18 years and older	NR	NR	531	Majority yes	General (Herbal therapy)	a) Safety	2~
Dickinson 2014 (Dickinson et al., 2014)	Questionnaire; R	Adults	NR	NR	2575	Majority yes	General	a) Effectiveness	2~
Eliason 1999 (Eliason et al., 1999)	Focus group; P	Customers from local suburban health food stores	NR	NR	33	All yes	General	a) Increased knowledge b) Safety c) Effectiveness d) Cost	7
Gardiner 2007 (Gardiner et al., 2007)	Questionnaire; R	Young adults aged 18 to 30 years old	NR	NR	6666	Majority yes	General (Herbs and dietary supplements)	a) Cost	2~

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Hall 2003 (Hall et al., 2003)	Questionnaire; P	Patients with localized prostate cancer treated with curative intent	Cancer	Life-threatening	238	Majority no	General	a) Effectiveness b) Clinical evidence c) Healthcare professional consultation	1~
Jazieh 2004 (Jazieh et al., 2004)	Questionnaire; P	Veterans with cancer	Cancer	Life-threatening	200	Majority yes	General	a) Effectiveness	0~
Mercer 2012 (Mercer et al., 2012)	Focus group; P	Patients with inflammatory bowel disease and irritable bowel syndrome	Inflammatory bowel disease and irritable bowel syndrome	Chronic	136	NR	Specific (Probiotic)	a) Safety b) Effectiveness	8
Milan 2008 (Milan et al., 2008)	Questionnaire; P	Women and men with or at risk for human immunodeficiency virus (HIV) infection	HIV infection	Life-threatening	93	Majority yes	General	a) Effectiveness	2~

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Miller 2004 (Miller and Russell, 2004)	Questionnaire; P	Women aged 25 to 45 years	NR	NR	51	All yes	General	a) Influenced by family and friends, mass media	0~
Murray 2008 (Murray et al., 2008)	Questionnaire; P	Cystic fibrosis patients and their families	Cystic fibrosis	Life-threatening	121	Majority no	General	a) Healthcare professional consultation	0~
Neuhouser 1999 (Neuhouser et al., 1999)	Questionnaire; P	Adults	NR	NR	104	All yes	General	a) Lack of knowledge b) Effectiveness	1~
Nichter 2006 (Nichter and Thompson, 2006)	Face-to-face interview; P	Adults supplement users between 20 and 70 years of age	NR	NR	60	All yes	General	a) Safety	7
Okleshen Peters 2003 (Okleshen Peters et al., 2004)	Face-to-face interview; P	Supplement users with age between 18 and 83	NR	NR	227	All yes	General	a) Effectiveness b) Healthcare professional consultation	7

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Ortiz 2006 (Ortiz and Clauson, 2006)	Questionnaire; P	Hispanic adults aged 18 and above	NR	NR	142	Majority yes	General (Herbal therapy)	a) Safety b) Influenced by family tradition	0~
Pally 1984 (Pally et al., 1984)	Questionnaire; P	Patients at a urban health centre	NR	NR	128	Majority no	General	a) Healthcare professional consultation	0~
Ranelli 1993 (Ranelli et al., 1993)	Questionnaire; R	Undergraduate pharmacy students	NR	NR	692	Nearly half yes	General	a) Effectiveness	1~
Rausch 2011 (Rausch et al., 2011)	Questionnaire; P	Radiation oncology patients	Cancer	Life-threatening	153	Majority yes	General	a) Healthcare professional consultation	0~
Reedy 2005 (Reedy et al., 2005)	Telephone interview; P	Colorectal cancer survivors and participants without cancer	Cancer	Life-threatening	22	NR	General	a) Effectiveness b) Safety c) Lack of knowledge	8
Schoenberg 2004 (Schoenberg et al., 2004)	Face-to-face interviews; P	Older adults with diabetes	Diabetes	Chronic	80	Majority yes	General	a) Effectiveness b) Healthcare professional consultation c) Ease of purchasing	8
Thompson 2007 (Thompson)	Face-to-face interviews; P	Dietary supplement users	NR	NR	60	All yes	General	a) Influenced by family and friends b) Safety	8

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n and Nichter, 2007) Tyler 2008 (Tyler et al., 2008)	Questionnaire; P	Women aged 20 to 64 at their medical visit	NR	NR	185	Majority no	Specific (Calcium supplement)	a) Lack of knowledge c) Healthcare professional consultation d) Cost e) Ease of using f) Taste g) Safety	2~
Tyler 2009 (Tyler Jr et al., 2009)	Questionnaire; P	African American women attending community outreach activities	NR	NR	160	Majority no	Specific (Calcium supplement)	a) Ease of using b) Effectiveness c) Safety d) Lack of knowledge e) Healthcare professional consultation	0~
Yoon 2004 (Yoon and Horne, 2004)	Questionnaire; P	Women aged 65 and above	Healthy	Healthy	70	Majority no	General	a) Safety b) Healthcare professional's advice c) Cost d) Effectiveness	0~
Ziegler 2003	Questionnaire; P	Skaters	Healthy	Healthy	105	Majority yes	General	a) Effectiveness	0~

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(Ziegler et al., 2003)									
United Kingdom and European Countries									
Arranz 2012 (Spain) (Arranz et al., 2012)	Questionnaire; P	Fibromyalgia patients	Fibromyalgia	Chronic	101	Majority yes	General	a) Healthcare professional consultation	0~
Arvanitoyannis 2006 (Romania) (Arvanitoyannis and Krystallis, 2006)	Questionnaire; P	Urban inhabitants of younger age group	NR	NR	220	Majority yes	Specific (Honey)	a) Effectiveness b) Taste c) Environmental friendly d) Safety e) Ease of purchase	0~
Crawford 2010 (UK) (Crawford et al., 2010)	Focus group; P	A group of young professionals and another involving the affluent middle-aged and retired group	NR	NR	34	Majority yes	Specific (Probiotic)	a) Influenced by family and friends	8

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David 2012 (Switzerland) (David et al., 2012)	Questionnaire; P	Swiss population at the entrance of local pharmacies, supermarkets and sports centres	NR	NR	147	All yes	General	a) Safety	0~
de Jong 2005 (Netherlands) (de Jong et al., 2005)	Focus group; P	Consumer and non-consumer of nutraceuticals	NR	NR	33	Majority yes	General	a) Cost b) Taste c) Safety d) Effectiveness	7
Fabian 2011 (Austria) (Fabian et al., 2011)	Questionnaire; P	Adult patients with Type 1 or 2 diabetes mellitus	Diabetes	Chronic	198	All yes	Specific (Cinnamon preparations)	a) Effectiveness	0~
Hök 2011 (Sweden) (Hök et al., 2011)	Face-to-face Interview; P	Patients with cancer	Cancer	Life-threatening	38	Majority yes	General	a) Safety	8
Krogstad 2007 (Norway) (Krogstad et al., 2007)	Focus group; P	Parents of children at Norwegian hospital	Cancer	Life-threatening	21	NR	General	a) Influenced by family and friends, mass media, and health store	7

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Landstrom 2009 (Sweden) (Landström et al., 2009)	Focus group; P	Swedish consumers	NR	NR	46	NR	General	a) Effectiveness	7
Lowry 2015 (UK) (Lowry et al., 2015)	Questionnaire; P	University students	NR	NR	238	Nearly half yes	General	a) Safety	0~
Nieper 2004 (UK) (Nieper, 2005)	Questionnaire; P	National track and field athletes	NR	NR	32	Majority yes	General	a) Effectiveness b) Lack of knowledge c) Cost	2~
Niva 2006 (Finland) (Niva, 2006)	Questionnaire; P	Adults above 15 years old	NR	NR	1210	Majority yes	General (Functional Food)	a) Effectiveness b) Taste c) Lack of knowledge d) Cost e) Effectiveness	2~
Petroczi 2007 (UK) (Petróczi et al., 2007)	Questionnaire; R	High performance athletes	NR	NR	520	Majority yes	General	a) Ease of using b) Healthcare professional consultation	2~

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Sandman 2015 (Germany) (Sandman et al., 2015)	Questionnaire; P	German consumer	NR	NR	1051	NR	Specific (Vitamin D-fortified products)	a) Effectiveness b) Cost c) Safety	2~
Williams 2004 (UK/Ireland, Spain, Austria and Egypt) (Williams et al., 2004)	Focus group; P	Sample of cross-cultural consisting of UK/Ireland, Spain, Austria and Egypt	NR	NR	31	NR	General (Functional Food)	a) Safety b) Effectiveness c) Cost d) Taste e) Ease of using	7
<b>Asia</b>									
Chen and Lin 2011 (Taiwan) (Chen et al., 2011)	Questionnaire; R	Elderly over the age of 65	NR	NR	914	Nearly half yes	General	a) Effectiveness	2~
de Guzman 2010 (Philippines) (de	Face-to-face interview; P	Filipino elderly (60–70 years old) from a private university	NR	NR	NR	All yes	General	a) Health benefits	7

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Guzman et al., 2010)									
Lee 2013 (Singapore) (Lee et al., 2013)	Questionnaire; P	Adult volunteers from a public health forum above the age of 21 years	NR	NR	141	NR	General	a) Effectiveness b) Healthcare professional consultation c) Safety	2~
Leung 2011 (Hong Kong) (Leung and Lum, 2011)	Questionnaire; P	Parents with children studying at kindergarten	NR	NR	730	Majority yes	General	a) Effectiveness	2~
Lim 2006 (Singapore) (Lim et al., 2006)	Questionnaire; P	Parents of paediatric cancer patients	Cancer	Life-threatening	73	Majority yes	General	a) Effectiveness	0~
Nakanishi 2014 (Japan) (Nakanishi, 2014)	Questionnaire; P	Menopausal women (40-60 years)	NR	NR	187	Majority no	General	a) Influenced by mass media, friends and family	0~
Suryani 2015	Questionnaire; P	Fourth year medical students	NR	NR	96	Majority yes	General	a) Influenced by friends and family	1~

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(Indonesia) (Suryani, 2015) Tangkiatkumjai 2013 (Thailand) (Tangkiatkumjai et al., 2013)	Questionnaire; P	from an Indonesian university Patients with chronic kidney disease from Thai clinic	Chronic kidney disease	Chronic	421	Majority no	General	a) Effectiveness b) Safety c) Healthcare consultation	1~
Tangkiatkumjai 2014 (a) (Thailand) (Tangkiatkumjai et al., 2014b)	Questionnaire; P	Adults aged 15 years or over	NR	NR	400	Majority yes	General	a) Effectiveness b) Safety	1~
Tangkiatkumjai 2014 (b) (Thailand) (Tangkiatkumjai et al., 2014a)	Face-to-face interview; P	Patients with stage 3-5 chronic kidney disease in a clinic	Stage 3-5 chronic kidney disease	Chronic	16	Majority yes	NR	a) Effectiveness b) Safety	8
Canada									
French 2008	Questionnaire; P	Women adults with reduced bone mineral	Low bone	Chronic	104	Majority yes	Specific (Calcium)	a) Lack of knowledge	2~

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(French et al., 2008)		density at the hip or spine	mineral density				dietary supplement)	b) Safety c) Ease of using nutraceuticals d) Cost	
Kristiansen 2005 (Kristiansen et al., 2005)	Questionnaire; P	University varsity athletes	NR	NR	383	Nearly half yes	General	a) Effectiveness b) Taste	3~
Krumbach 1999 (Krumbach et al., 1999)	Questionnaire; P	University athletes aged 19 years and older	NR	NR	411	Majority yes	General	a) Influenced by religion b) Cost c) Effectiveness d) Influenced by family and friends, coach e) Healthcare professional consultation	4~
Legare 2007 (Légaré et al., 2007)	Focus group and face-to-face interview; P	Menopausal women aged 45 to 64	Menopausal	Healthy	40	NR	General	a) Lack of knowledge b) Healthcare professional consultation c) Cost	8

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Lemay 2011 (Lemay et al., 2011) Page 2015 (Page et al., 2015)	Questionnaire; P	Caregiver of children with type 1 diabetes mellitus	Type 1 diabetes mellitus	Chronic	195	Majority yes	General	a) Lack of knowledge b) Effectiveness	3~
Pike 2013 (Pike et al., 2013)	Face-to-face Interview; P	Parents of children who were using natural health products	Healthy (4 with chronic disease)	Healthy (4 with chronic disease)	20	All yes	General	a) Healthcare professional consultation b) Influenced by family and friends	8
Vella 2014 (Vella et al., 2014)	Questionnaire; P	Community-dwelling older adults (>60 years old)	NR	NR	200	Majority yes	General (Functional food)	a) Increased knowledge	2~
<b>Middle-eastern countries</b>									
Bilici 2012 (Turkey) (Bilici et al., 2012)	Questionnaire; P	Turkish adults between 19-65 years age	NR	NR	400	Majority no	Specific (Kefir)	a) Effectiveness b) Lack of knowledge	4~

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Ibrahim 2014 (Saudi Arabia) (Ibrahim et al., 2014)	Questionnaire; P	Adult oncology patients at a hospital	Cancer	Life-threatening	104	Majority yes	General	a) Influenced by religion	2~
Ibrahim 2016 (Iraq) (Ibrahim et al., 2016)	Face-to-face Interview; P	Hypertensive adults	Hypertension	Chronic	20	Majority yes	General	a) Influenced by religion b) Cost c) Safety	8
Samuels 2012 (Israel) (Samuels et al., 2012)	Questionnaire; P	Hospitalized internal medicine patients	NR	NR	280	Majority no	General	a) Healthcare professional consultation	2~
Australia/New Zealand									
Barnes 2016 (Australia) (Barnes et al., 2016)	Questionnaire; P	University students and staff members	NR	NR	1,549	Majority yes	General	a) Influenced by family and friends	3~

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Downie 2015 (Australia) (Downie et al., 2015)	Questionnaire; P	Optometrist	NR	NR	379	Majority yes	General	a) Effectiveness b) Safety c) Cost d) Ease of using nutraceuticals	2~
Holt 2010 (New Zealand) (Holt et al., 2010)	Questionnaire; P	Adults waiting at general practitioner surgeries	NR	NR	265	Majority yes	General	a) Cost b) Effectiveness c) Lack of knowledge d) Effectiveness e) Manufacturer country/Preference g) Healthcare professional consultation	2~
Klafke 2014 (Australia) (Klafke et al., 2012)	Face-to-face interview; P	Cancer patients and their significant others	Cancer	Life-threatening	67	Majority yes	General	a) Influenced by family and friends b) Healthcare professional consultation c) Safety d) Effectiveness	8

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O'Dea 2000 (Australia) (O'Dea and Rawstorne, 2000)	Focus group; P	Adolescent aged 11-18 years	NR	NR	78	Nearly half yes	General	a) Effectiveness b) Influenced by family and friends, coach c) Taste d) Other product features	8
Patch 2005 (Australia) (Patch et al., 2005)	Focus group; P	Overweight community-based adults aged 30-80 years	Overweight	NR	42	NR	Specific (Omega-3–Enriched Functional Foods)	a) Effectiveness b) Influenced by family and friends c) Healthcare professional consultation d) Ease of using nutraceuticals e) Taste f) Lack of knowledge g) Cost	8
Schultz 2011 (New Zealand) (Schultz et al., 2011)	Questionnaire; P	Adult residents aged 18 years old and above	NR	NR	873	Majority no	Specific (Probiotic therapy)	a) Healthcare professional consultation	2~
Sinha 2005 (Australia)	Questionnaire; P	Family of children with attention deficit	Attention deficit hyperacti	Chronic	75	Majority yes	General	a) Influenced by mass media	2~

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(Sinha and Efron, 2005)		hyperactivity disorder at a hospital	vity disorder					b) Influenced by family/friends c) Effectiveness d) Safety	
African countries									
Steele 2005 (South Africa) (Steele and Senekal, 2005)	Questionnaire; P	University students	NR	NR	400	Majority yes	General	a) Effectiveness b) Ease of using nutraceuticals c) Cost	2~

P, Prospective; R, Retrospective; NR, Not reported.  
# Questionnaire was quantitative study while focus group and interview were qualitative studies  
\*Proportion of participants in the study- Majority= More than half, Nearly half=40-49%  
~Assessed using part of modified Newcastle-Ottawa Scale (Appendix S2) for questionnaire studies, otherwise Joanna Briggs Institute critical appraisal tools for qualitative studies

**Table 2. Main themes of factors affecting consumer's decision on the use of nutraceuticals.**

<b>Theme</b>	<b>Description</b>
<b>Perceptions of the Products</b>	
Health Benefits	Consumers perceived taking nutraceuticals provided health benefits or not
Safety	Consumers perceived taking nutraceuticals was safe or not
Other Product Features	Other product-related features affecting the decision to take nutraceuticals
<b>Accessibility</b>	
Cost	Affordability of nutraceuticals
Ease of Using	Taking nutraceuticals was easy or not
Ease of Purchasing	Easy to purchase nutraceuticals or not, in terms of the availability of the products.
<b>Source of Information</b>	
Individual Knowledge	Level of consumers' knowledge about nutraceuticals and nutrition
Healthcare Professional's Consultation	Desire to consult healthcare professional about taking nutraceuticals
Influence Other Than Healthcare Professional (Friends and Family, Mass Media, Religion)	Other influences affecting the decision to take nutraceuticals

**Table 3. Details of of factors affecting consumer’s decision on the use of nutraceuticals.**

Third Order	Second Order	First Order	Number of Participants*	Health Condition
Perceptions of Nutraceuticals	Health Benefits	Facilitator/barrier: Believe (Arvanitoyannis and Krystallis, 2006, Bilici et al., 2012, Blendon et al., 2001, Bruno and Ellis, 2005, Fabian et al., 2011, Hall et al., 2003, Leung and Lum, 2011, Page et al., 2015, Patch et al., 2005, Sinha and Efron, 2005, Tangkiatkumjai et al., 2013, Tangkiatkumjai et al., 2014b, Lim et al., 2006, Milan et al., 2008, Blendon et al., 2013, Chen et al., 2011, Dickinson et al., 2014, Eliason et al., 1999, Jazieh et al., 2004, Kristiansen et al., 2005, Krumbach et al., 1999, Neuhouser et al., 1999, O'Dea and Rawstorne, 2000, Okleshen Peters et al., 2004, Ranelli et al., 1993, Ziegler et al., 2003, Sandmann et al., 2015) or doubt (Holt et al., 2010, Mercer et al., 2012, Schoenberg et al., 2004, Tangkiatkumjai et al., 2014a, Yoon and Horne, 2004, Arthur et al., 2012, de Jong et al., 2005, Downie et al., 2015, Landström et al., 2009, Nieper, 2005, Niva, 2006, Steele and Senekal, 2005, Tyler et al., 2008, Tyler Jr et al., 2009, Lemay et al., 2011, Klafke et al., 2012) that nutraceuticals are beneficial for health	Less than half (Fabian et al., 2011, Sinha and Efron, 2005, Tangkiatkumjai et al., 2013, Tangkiatkumjai et al., 2014b, Milan et al., 2008, Chen et al., 2011, Dickinson et al., 2014, Jazieh et al., 2004, Krumbach et al., 1999, Ziegler et al., 2003, Holt et al., 2010, Schoenberg et al., 2004, Tangkiatkumjai et al., 2014a, Tyler et al., 2008, Yoon and Horne, 2004, Lee et al., 2013), Nearly half (Bruno and Ellis, 2005), Half (Nieper, 2005), Majority (Hall et al., 2003, Page et al., 2015, Arvanitoyannis and Krystallis, 2006, Lim et al., 2006, Blendon et al., 2013, Downie et al., 2015, Steele and Senekal, 2005), Nearly all (Bilici et al., 2012), NR (Blendon et al., 2001, Patch et al., 2005, Leung and Lum, 2011, Eliason et al., 1999, Kristiansen et al., 2005, Neuhouser et al., 1999, O'Dea and Rawstorne, 2000, Okleshen Peters et al., 2004, Ranelli et al., 1993, Arthur et al., 2012, de Jong et al., 2005, Klafke et al., 2012, Landström et al., 2009, Lemay et al., 2011, Mercer	Healthy (Ziegler et al., 2003, Yoon and Horne, 2004), Chronic (Sinha and Efron, 2005, Bruno and Ellis, 2005, Fabian et al., 2011, Page et al., 2015, Tangkiatkumjai et al., 2013, Lemay et al., 2011, Mercer et al., 2012, Schoenberg et al., 2004, Tangkiatkumjai et al., 2014a), Life-threatening (Hall et al., 2003, Lim et al., 2006, Milan et al., 2008, Jazieh et al., 2004, Arthur et al., 2012, Klafke et al., 2012), NR (Arvanitoyannis and Krystallis, 2006, Patch et al., 2005, Bilici et al., 2012, Blendon et al., 2001, Tangkiatkumjai et al., 2014b, Leung and Lum, 2011, Blendon et al., 2013, Chen et al., 2011, Dickinson et al., 2014, Eliason et al., 1999, Kristiansen et al., 2005, Krumbach et al., 1999, Neuhouser et al., 1999,

	et al., 2012, Niva, 2006, Tyler Jr et al., 2009)	O'Dea and Rawstorne, 2000, Okleshen Peters et al., 2004, Ranelli et al., 1993, de Jong et al., 2005, Downie et al., 2015, Holt et al., 2010, Landström et al., 2009, Nieper, 2005, Niva, 2006, Steele and Senekal, 2005, Tyler et al., 2008, Tyler Jr et al., 2009, Lee et al., 2013)
Important factor: Health benefits of products (Lee et al., 2013, Williams et al., 2004)	Less than half (Lee et al., 2013), NR (Williams et al., 2004)	NR (Lee et al., 2013, Williams et al., 2004)
Facilitator: Positive experience of other people (Sinha and Efron, 2005)	Less than half (Sinha and Efron, 2005)	Chronic (Sinha and Efron, 2005)
Facilitator/barrier: Perception on nutrients adequacy (de Jong et al., 2005, Holt et al., 2010, Downie et al., 2015, Nieper, 2005, Niva, 2006, Steele and Senekal, 2005, Tyler et al., 2008, Tyler Jr et al., 2009, Landström et al., 2009) /inadequacy (Chen et al., 2011, Dickinson et al., 2014, Eliason et al., 1999, Fabian et al., 2011, Jazieh et al., 2004, Kristiansen et al., 2005, Krumbach et al., 1999, Neuhouser et al., 1999, O'Dea and Rawstorne, 2000, Okleshen Peters et al., 2004, Ranelli et al., 1993, Sandmann et al., 2015, Ziegler et al., 2003) from diet alone	Less than half (Chen et al., 2011, Dickinson et al., 2014, Fabian et al., 2011, Jazieh et al., 2004, Krumbach et al., 1999, Ziegler et al., 2003, Holt et al., 2010, Tyler et al., 2008), Half (Nieper, 2005), Majority (Sandmann et al., 2015, Downie et al., 2015, Steele and Senekal, 2005), NR (Eliason et al., 1999, Kristiansen et al., 2005, Neuhouser et al., 1999, O'Dea and Rawstorne, 2000, Okleshen Peters et al., 2004, Ranelli et al., 1993, de Jong et al., 2005, Landström et al., 2009, Niva, 2006, Tyler Jr et al., 2009)	Healthy (Ziegler et al., 2003), Chronic (Fabian et al., 2011), Life-threatening (Jazieh et al., 2004), NR (Chen et al., 2011, Dickinson et al., 2014, Eliason et al., 1999, Kristiansen et al., 2005, Krumbach et al., 1999, Neuhouser et al., 1999, O'Dea and Rawstorne, 2000, Okleshen Peters et al., 2004, Ranelli et al., 1993, Sandmann et al., 2015, de

<p>Indifference/Barrier: Results from clinical evidence would affect (Caldentey et al., 2013), minimally affect (Blendon et al., 2013), or not affect (Blendon et al., 2001) perception.</p>	<p>Majority (Blendon et al., 2013, Caldentey et al., 2013), NR (Blendon et al., 2001)</p>	<p>Jong et al., 2005, Downie et al., 2015, Holt et al., 2010, Landström et al., 2009, Nieper, 2005, Niva, 2006, Steele and Senekal, 2005, Tyler et al., 2008, Tyler Jr et al., 2009)</p> <p>NR(Blendon et al., 2001, Blendon et al., 2013, Caldentey et al., 2013)</p>
<p>Facilitator: Try to see if there really is any health benefit (de Guzman et al., 2010) and hopeful that it works (Mercer et al., 2012, Arthur et al., 2012, Klafke et al., 2012, Sinha and Efron, 2005)</p>	<p>NR (Mercer et al., 2012, Arthur et al., 2012, Klafke et al., 2012, Sinha and Efron, 2005, de Guzman et al., 2010)</p>	<p>Chronic (Mercer et al., 2012, Sinha and Efron, 2005), Life-threatening (Arthur et al., 2012, Klafke et al., 2012), NR (de Guzman et al., 2010)</p>
<p>Facilitator: Enhance effectiveness of therapy when taking together with conventional medicines (Bruno and Ellis, 2005, Lim et al., 2006), or relieve side effects of conventional medicines (Hall et al., 2003, Milan et al., 2008)</p>	<p>Less than half (Milan et al., 2008), Nearly half (Bruno and Ellis, 2005), Majority (Hall et al., 2003, Lim et al., 2006)</p>	<p>Chronic (Bruno and Ellis, 2005), Life-threatening (Hall et al., 2003, Lim et al., 2006, Milan et al., 2008)</p>
<p>Barrier: Satisfied with effectiveness of conventional medicines (Lemay et al., 2011, Mercer et al., 2012, Tangkiatkumjai et al., 2014a)</p>	<p>Less than half (Tangkiatkumjai et al., 2014a), NR (Mercer et al., 2012, Lemay et al., 2011)</p>	<p>Chronic (Tangkiatkumjai et al., 2014a, Mercer et al., 2012, Lemay et al., 2011)</p>

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	Facilitator: Believe that safe to use nutraceuticals (Arthur et al., 2012, Carlisle and Shafir, 2005, David et al., 2012, Eliason et al., 1999, Hök et al., 2011, Ibrahim et al., 2016, Sinha and Efron, 2005, Ortiz and Clauson, 2006, Nichter and Thompson, 2006, Lowry et al., 2015, Klafke et al., 2012, Mercer et al., 2012, Thompson and Nichter, 2007)	Less than half (Ortiz and Clauson, 2006, Tangkiatkumjai et al., 2013, Hök et al., 2011), Nearly half (Carlisle and Shafir, 2005), NR (Arthur et al., 2012, Eliason et al., 1999, Ibrahim et al., 2016, Lowry et al., 2015, Nichter and Thompson, 2006, Sinha and Efron, 2005, David et al., 2012, Klafke et al., 2012, Thompson and Nichter, 2007)	Chronic (Arthur et al., 2012, Ibrahim et al., 2016, Sinha and Efron, 2005, Mercer et al., 2012), Life-threatening (Hök et al., 2011, Klafke et al., 2012), NR (Carlisle and Shafir, 2005, Eliason et al., 1999, Lowry et al., 2015, Nichter and Thompson, 2006, Ortiz and Clauson, 2006, David et al., 2012, Thompson and Nichter, 2007)
Safety	Barrier: Concern of potential side effect and drug interaction (French et al., 2008, Yoon and Horne, 2004, Tyler et al., 2008, Tangkiatkumjai et al., 2014a, Sandmann et al., 2015, Reedy et al., 2005, Downie et al., 2015, Tyler Jr et al., 2009)	Less than half (French et al., 2008, Sandmann et al., 2015, Tangkiatkumjai et al., 2014a, Tyler et al., 2008, Yoon and Horne, 2004), Nearly all (Downie et al., 2015), NR (Reedy et al., 2005, Tyler Jr et al., 2009)	Chronic (French et al., 2008, Tangkiatkumjai et al., 2014a), Life-threatening (Reedy et al., 2005), NR (Sandmann et al., 2015, Tyler et al., 2008, Yoon and Horne, 2004, Downie et al., 2015, Tyler Jr et al., 2009)
	Important factor: Safety of products (Arvanitoyannis and Krystallis, 2006, de Jong et al., 2005, Williams et al., 2004, Lee et al., 2013, Mercer et al., 2012)	Less than half (Lee et al., 2013), Majority (Arvanitoyannis and Krystallis, 2006), NR (de Jong et al., 2005, Mercer et al., 2012, Williams et al., 2004)	Chronic (Mercer et al., 2012), Life-threatening, NR (Arvanitoyannis and Krystallis, 2006, de Jong et al., 2005, Lee et al., 2013, Williams et al., 2004)

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Other Product Features	Important factor: Taste of products (Arvanitoyannis and Krystallis, 2006, de Jong et al., 2005, Kristiansen et al., 2005, Niva, 2006, O'Dea and Rawstorne, 2000, Patch et al., 2005, Tyler et al., 2008, Williams et al., 2004), Manufactured in environmental friendly way (Arvanitoyannis and Krystallis, 2006), Country of manufacture(Patch et al., 2005), Attractive packaging(O'Dea and Rawstorne, 2000)	NR (Arvanitoyannis and Krystallis, 2006, de Jong et al., 2005, Kristiansen et al., 2005, Niva, 2006, O'Dea and Rawstorne, 2000, Patch et al., 2005, Tyler et al., 2008, Williams et al., 2004)	Less than half (Williams et al., 2004), Majority(Arvanitoyannis and Krystallis, 2006), NR (de Jong et al., 2005, Niva, 2006, Kristiansen et al., 2005, O'Dea and Rawstorne, 2000, Patch et al., 2005, Tyler et al., 2008)
Accessibility Cost	Barrier: High cost (de Jong et al., 2005, Downie et al., 2015, French et al., 2008, Holt et al., 2010, Krumbach et al., 1999, Légaré et al., 2007, Niva, 2006, Patch et al., 2005, Sandmann et al., 2015, Steele and Senekal, 2005, Tyler et al., 2008, Yoon and Horne, 2004)	Less than half (Downie et al., 2015, French et al., 2008, Holt et al., 2010, Krumbach et al., 1999, Sandmann et al., 2015, Steele and Senekal, 2005, Tyler et al., 2008, Yoon and Horne, 2004), NR(de Jong et al., 2005, Légaré et al., 2007, Niva, 2006, Patch et al., 2005)	Healthy (Légaré et al., 2007, Yoon and Horne, 2004), Chronic (French et al., 2008), NR (de Jong et al., 2005, Downie et al., 2015, Holt et al., 2010, Krumbach et al., 1999, Niva, 2006, Patch et al., 2005, Sandmann et al., 2015, Steele and Senekal, 2005, Tyler et al., 2008)
	Facilitator: Cost of nutraceuticals is lower than conventional medicines (Gardiner et al., 2007, Ibrahim et al., 2016)	NR (Gardiner et al., 2007, Ibrahim et al., 2016)	Chronic (Ibrahim et al., 2016), NR (Gardiner et al., 2007)
	Indifference: Cost is not a concern (Eliason et al., 1999, Nieper, 2005, Williams et al., 2004)	Less than half (Nieper, 2005), NR (Eliason et al., 1999, Williams et al., 2004)	NR (Eliason et al., 1999, Nieper, 2005, Williams et al., 2004)

		Facilitator: Obtaining nutrients through nutraceuticals is easier than from diet (Downie et al., 2015, French et al., 2008, Petróczy et al., 2007)	Less than half (Downie et al., 2015, French et al., 2008, Petróczy et al., 2007)	Chronic (French et al., 2008), NR (Downie et al., 2015, Petróczy et al., 2007)
	Ease of Using	Barrier: Too much effort in taking nutraceuticals (Steele and Senekal, 2005, Tyler et al., 2008, Tyler Jr et al., 2009)	Less than half (Steele and Senekal, 2005, Tyler et al., 2008, Tyler Jr et al., 2009)	NR (Steele and Senekal, 2005, Tyler et al., 2008, Tyler Jr et al., 2009)
		Important factor: Ease of using in social situations (Williams et al., 2004)	NR (Williams et al., 2004)	NR (Williams et al., 2004)
	Ease of Purchasing	Facilitator (Arvanitoyannis and Krystallis, 2006, Patch et al., 2005, Page et al., 2015) /Barrier (Schoenberg et al., 2004) /Important factor (Williams et al., 2004)	Majority (Arvanitoyannis and Krystallis, 2006), NR (Page et al., 2015, Patch et al., 2005, Schoenberg et al., 2004, Williams et al., 2004)	Chronic (Page et al., 2015, Schoenberg et al., 2004), NR (Arvanitoyannis and Krystallis, 2006, Patch et al., 2005, Williams et al., 2004)
Source of Information	Individual Knowledge	Barrier: Lack of knowledge about nutraceuticals (Bilici et al., 2012, Holt et al., 2010, Légaré et al., 2007, Lemay et al., 2011, Nieper, 2005, Niva, 2006, Patch et al., 2005, Reedy et al., 2005, Tyler et al., 2008, Tyler Jr et al., 2009, French et al., 2008)	Half (Nieper, 2005), Majority (Bilici et al., 2012, French et al., 2008, Holt et al., 2010, Tyler et al., 2008), NR (Légaré et al., 2007, Lemay et al., 2011, Niva, 2006, Patch et al., 2005, Reedy et al., 2005, Tyler Jr et al., 2009)	Healthy (Légaré et al., 2007), Chronic (French et al., 2008, Lemay et al., 2011), Life-threatening (Reedy et al., 2005), NR (Bilici et al., 2012, Holt et al., 2010, Nieper, 2005, Niva, 2006, Patch et al., 2005, Tyler et al., 2008, Tyler Jr et al., 2009)

	Facilitator: Improved knowledge about nutraceuticals (Eliason et al., 1999, Vella et al., 2014)	Majority (Vella et al., 2014), NR (Eliason et al., 1999)	NR (Eliason et al., 1999, Vella et al., 2014)
	Facilitator: Lack of knowledge about how to obtain nutrients from food (Neuhouser et al., 1999)	NR (Neuhouser et al., 1999)	NR (Neuhouser et al., 1999)
	Important factor: Will consult healthcare professional before making decision (Arcury et al., 2005, Hall et al., 2003, Holt et al., 2010, Lee et al., 2013, Murray et al., 2008, Pally et al., 1984, Patch et al., 2005, Pike et al., 2013, Samuels et al., 2012)	Less than half (Hall et al., 2003, Lee et al., 2013, Murray et al., 2008), Majority (Holt et al., 2010, Pally et al., 1984), NR (Arcury et al., 2005, Patch et al., 2005, Pike et al., 2013, Samuels et al., 2012)	Healthy (Pike et al., 2013), Life-threatening (Hall et al., 2003, Murray et al., 2008), NR (Arcury et al., 2005, Holt et al., 2010, Lee et al., 2013, Pally et al., 1984, Samuels et al., 2012)
Healthcare Professionals' Consultation	Facilitator: Recommended by healthcare professional (Arranz et al., 2012, Bruno and Ellis, 2005, Klafke et al., 2012, Okleshen Peters et al., 2004, Page et al., 2015, Petróczi et al., 2007, Rausch et al., 2011, Schoenberg et al., 2004, Schultz et al., 2011)	Less than half (Bruno and Ellis, 2005, Petróczi et al., 2007, Rausch et al., 2011), Majority (Arranz et al., 2012, Schultz et al., 2011), NR (Klafke et al., 2012, Okleshen Peters et al., 2004, Page et al., 2015, Schoenberg et al., 2004)	Chronic (Bruno and Ellis, 2005, Page et al., 2015, Schoenberg et al., 2004), Life-threatening (Klafke et al., 2012, Rausch et al., 2011), NR (Arranz et al., 2012, Okleshen Peters et al., 2004, Petróczi et al., 2007, Schultz et al., 2011)
	Barrier: Healthcare professional advised against the use of nutraceuticals (Blendon et al., 2013, Caldentey et al., 2013, Krumbach et al., 1999, Tangkiatkumjai et al., 2014a, Tyler et al., 2008, Tyler Jr et al., 2009, Yoon and Horne, 2004)	Less than half (Blendon et al., 2013, Krumbach et al., 1999, Tangkiatkumjai et al., 2014a, Yoon and Horne, 2004), Majority (Caldentey et al., 2013), NR (Tyler et al., 2008, Tyler Jr et al., 2009)	Healthy (Yoon and Horne, 2004), Chronic (Tangkiatkumjai et al., 2014a), NR (Blendon et al., 2013, Caldentey et al., 2013, Krumbach et al., 1999, Tyler

			et al., 2008, Tyler Jr et al., 2009)
	Barrier: Unable to discuss with close-minded healthcare professional (Légaré et al., 2007)	NR (Légaré et al., 2007)	Healthy (Légaré et al., 2007)
	Facilitator: Family and friends recommended (Barnes et al., 2016, Crawford et al., 2010, Krogstad et al., 2007, Miller and Russell, 2004, Nakanishi, 2014, O'Dea and Rawstorne, 2000, Patch et al., 2005, Pike et al., 2013, Suryani, 2015, Tangkiatkumjai et al., 2013)	Less than half (Barnes et al., 2016, Miller and Russell, 2004, Nakanishi, 2014, Suryani, 2015), NR (Crawford et al., 2010, Krogstad et al., 2007, O'Dea and Rawstorne, 2000, Patch et al., 2005, Pike et al., 2013, Tangkiatkumjai et al., 2013)	Chronic(Tangkiatkumjai et al., 2013), Life-threatening (Krogstad et al., 2007), NR (Barnes et al., 2016, Crawford et al., 2010, Miller and Russell, 2004, Nakanishi, 2014, O'Dea and Rawstorne, 2000, Pike et al., 2013, Suryani, 2015, Patch et al., 2005)
Influences Other Than Healthcare Professiona l	Facilitator: Mass media including advertisement (Miller and Russell, 2004, Nakanishi, 2014, Sinha and Efron, 2005) and lay publication (Arcury et al., 2005)	Less than half (Miller and Russell, 2004, Nakanishi, 2014, Sinha and Efron, 2005), NR (Arcury et al., 2005)	NR (Miller and Russell, 2004, Nakanishi, 2014, Sinha and Efron, 2005, Arcury et al., 2005)
	Barrier: Sceptical towards advertisement (Patch et al., 2005)	NR (Patch et al., 2005)	NR (Patch et al., 2005)
	Facilitator: Health store staff's recommendation (Krogstad et al., 2007)	NR (Krogstad et al., 2007)	Life-threatening (Krogstad et al., 2007)
	Facilitator: Coach's recommendation (O'Dea and Rawstorne, 2000, Krumbach et al., 1999)	NR (O'Dea and Rawstorne, 2000), Majority (Krumbach et al., 1999)	NR (Krumbach et al., 1999, O'Dea and Rawstorne, 2000)

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Facilitator (Ibrahim et al., 2014, Ibrahim et al., 2016) /Barrier (Krumbach et al., 1999): Religion	Majority (Ibrahim et al., 2014, Krumbach et al., 1999), NR (Ibrahim et al., 2016)	Chronic (Ibrahim et al., 2016), Life-threatening (Ibrahim et al., 2014), NR (Krumbach et al., 1999)
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\*Proportion of participants in the study who reported the results as described in the sub themes- Less than half= 1-39%, Nearly half= 40-49%, Half = 50%, Majority= 51-89%, Nearly all= 90-99%, All=100%; NR, Not reported.

**Table 4. Assessment of confidence of findings using CerQUAL.**

No.	Factors that affect the decision of consumers in taking nutraceuticals	Relevant papers	Confidence in the evidence	Explanation of confidence in the evidence assessment*
1	<p><b>Facilitator and barrier: Effect of perceived health benefits of nutraceuticals</b></p> <p>Across many studies, the perception of consumers whether if taking nutraceuticals were beneficial for health or not contributed importantly to the decision to take nutraceuticals. The belief that taking nutraceuticals was beneficial for health motivated consumers to take nutraceuticals, and vice versa.</p>	<p>(Arvanitoyannis and Krystallis, 2006, Bilici et al., 2012, Blendon et al., 2001, Bruno and Ellis, 2005, Fabian et al., 2011, Hall et al., 2003, Leung and Lum, 2011, Page et al., 2015, Patch et al., 2005, Sinha and Efron, 2005, Tangkiatkumjai et al., 2013, Tangkiatkumjai et al., 2014b, Lim et al., 2006, Milan et al., 2008, Blendon et al., 2013, Chen et al., 2011, Dickinson et al., 2014, Eliason et al., 1999, Jazieh et al., 2004, Kristiansen et al., 2005, Krumbach et al., 1999, Neuhouser et al., 1999, O'Dea and Rawstorne, 2000, Okleshen Peters et al., 2004, Ranelli et al., 1993, Ziegler et al., 2003, Sandmann et al., 2015, Arthur et al., 2012, de Jong et al., 2005, Downie et al., 2015, Holt et al., 2010, Klafke et al., 2012, Landström et al., 2009, Lemay et al., 2011, Mercer et al., 2012, Nieper, 2005, Niva, 2006, Schoenberg et al., 2004, Steele and Senekal, 2005, Tangkiatkumjai et al., 2014a, Tyler et al., 2008, Tyler Jr et al., 2009, Yoon and Horne, 2004, Lee et al., 2013, Williams et al., 2004)</p>	High confidence	45 studies of mainly moderate quality. Rich, coherent and relevant data from many studies across population with different health conditions.
2	<p><b>Facilitator: Positive experience of others who have used nutraceuticals</b></p> <p>The positive experience of others who have used</p>	(Sinha and Efron, 2005)	Low confidence	1 study of low quality with relevant data limited to few participants with chronic illness.

	nutraceuticals motivated consumers to use nutraceuticals.			
3	<p><b>Facilitator and barrier: Perceived adequacy of nutrients intake from diet alone</b></p> <p>Across many studies, consumers who perceived that taking normal diet alone cannot provide adequate nutrients would take nutraceuticals, and vice versa.</p>	(Chen et al., 2011, Dickinson et al., 2014, Eliason et al., 1999, Fabian et al., 2011, Jazieh et al., 2004, Kristiansen et al., 2005, Krumbach et al., 1999, Neuhouser et al., 1999, O'Dea and Rawstorne, 2000, Okleshen Peters et al., 2004, Ranelli et al., 1993, Sandmann et al., 2015, Ziegler et al., 2003, de Jong et al., 2005, Downie et al., 2015, Holt et al., 2010, Landström et al., 2009, Nieper, 2005, Niva, 2006, Steele and Senekal, 2005, Tyler et al., 2008, Tyler Jr et al., 2009)	High confidence	22 studies of mainly moderate quality. Rich, coherent and relevant data from many studies across population with different health conditions.
5	<p><b>Indifference and barrier: Perceived importance of clinical evidence</b></p> <p>The lack of support from clinical evidence on the health benefits of nutraceuticals would only affect the decision of those who perceived importance of clinical evidence and vice versa.</p>	(Caldentey et al., 2013, Blendon et al., 2013, Blendon et al., 2001)	Moderate confidence	3 studies of moderate and low quality.
6	<p><b>Facilitator: Hopeful that it is effective</b></p> <p>Mainly for population with chronic and life-threatening disease, they would like to try</p>	(Mercer et al., 2012, Arthur et al., 2012, Klafke et al., 2012, Sinha and Efron, 2005, de Guzman et al., 2010)	Moderate confidence	5 studies of mainly moderate quality. Coherent and relevant data limited to population with mainly chronic and life-threatening diseases.

	nutraceuticals and were hopeful that it would be effective.			
7	<p><b>Facilitator: Enhance therapeutic effect of conventional medicines</b></p> <p>Consumers with chronic and life-threatening diseases took nutraceuticals in order to enhance the effectiveness of therapy or to relieve the side effect caused by conventional medicine.</p>	(Bruno and Ellis, 2005, Lim et al., 2006, Hall et al., 2003, Milan et al., 2008)	High confidence	4 studies of moderate quality. Coherent, rich and relevant data limited to population with chronic and life-threatening diseases.
8	<p><b>Barrier: Satisfied with conventional medicines</b></p> <p>If consumers were satisfied with their conventional medicines regime, they would avoid the use of nutraceuticals.</p>	(Lemay et al., 2011, Mercer et al., 2012, Tangkiatkumjai et al., 2014a)	Moderate confidence	3 studies of moderate quality. Coherent and relevant data limited to population with chronic diseases.
9	<p><b>Facilitator, barrier and important factor: Perceived safety of nutraceuticals</b></p> <p>Consumers who perceived that taking nutraceuticals was safe took nutraceuticals, while those with concern of side effect and</p>	(Arthur et al., 2012, Carlisle and Shafir, 2005, David et al., 2012, Eliason et al., 1999, Hok et al., 2011, Ibrahim et al., 2016, Sinha and Efron, 2005, Ortiz and Clauson, 2006, Nichter and Thompson, 2006, Lowry et al., 2015, Klafke et al., 2012, Mercer et al., 2012, Thompson and Nichter, 2007, Arvanitoyannis and Krystallis, 2006, de Jong et al., 2005, Lee et al., 2013, Williams et al., 2004, Downie et al., 2015, French et al., 2008, Reedy et al., 2005, Sandmann et al., 2015,	High confidence	26 studies of mainly moderate quality. Rich, coherent and relevant data from many studies across population with different health conditions.

	drug interaction would avoid the use of nutraceuticals.	Tangkiatkumjai et al., 2014a, Tyler et al., 2008, Tyler Jr et al., 2009, Yoon and Horne, 2004)		
10	<p><b>Important factor: Other product-related features</b></p> <p>Other product-related features important for consumer's consideration included mainly the taste of the products, followed with country of manufacture, packaging and whether it was manufactured in an environment-friendly way.</p>	(Arvanitoyannis and Krystallis, 2006, de Jong et al., 2005, Kristiansen et al., 2005, Niva, 2006, O'Dea and Rawstorne, 2000, Patch et al., 2005, Tyler et al., 2008, Williams et al., 2004)	Moderate confidence	8 studies of mainly moderate quality. Relevant data from several studies.
11	<p><b>Facilitator, barrier and indifference: Perceived affordability of nutraceuticals</b></p> <p>Consumers who perceived the cost of nutraceuticals as high prevented the use of nutraceuticals and vice versa. Some consumers considered the cost of nutraceuticals as lower than conventional medicines and took nutraceuticals.</p>	(de Jong et al., 2005, Downie et al., 2015, French et al., 2008, Holt et al., 2010, Krumbach et al., 1999, Légaré et al., 2007, Niva, 2006, Patch et al., 2005, Sandmann et al., 2015, Steele and Senekal, 2005, Tyler et al., 2008, Yoon and Horne, 2004, Eliason et al., 1999, Gardiner et al., 2007, Ibrahim et al., 2016, Nieper, 2005, Williams et al., 2004)	High confidence	17 studies of mainly moderate quality. Rich, coherent and relevant data from many studies across population with different health conditions.
12	<p><b>Facilitator, barrier and important factor: Perceived ease of using nutraceuticals</b></p>	(Downie et al., 2015, French et al., 2008, Petróczi et al., 2007, Steele and Senekal, 2005, Tyler et al., 2008, Tyler Jr et al., 2009, Williams et al., 2004)	Moderate confidence	7 studies of moderate and low quality. Rich, coherent and relevant data from several studies.

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	<p>Consumers who perceived taking nutraceuticals was easier than taking food to obtain nutrients took nutraceuticals. For consumers who perceived taking nutraceuticals required too much effort, they avoid the use. It was important for nutraceuticals to be easily used in social situation.</p>			
13	<p><b>Facilitator, barrier and important factor: Ease of purchasing</b></p> <p>If nutraceuticals products were easily available, it motivated consumers to use nutraceuticals and vice versa.</p>	<p>(Arvanitoyannis and Krystallis, 2006, Patch et al., 2005, Page et al., 2015, Schoenberg et al., 2004, Williams et al., 2004)</p>	<p>Moderate confidence</p>	<p>5 studies of moderate and low quality. Coherent and relevant data from several studies.</p>
14	<p><b>Facilitator and barrier: Level of individual's knowledge</b></p> <p>Consumers require adequate knowledge about the nutraceuticals products before considering the use of nutraceuticals. Also, those who perceived that they did not know how to obtain nutrients from food motivated them to use nutraceuticals.</p>	<p>(Bilici et al., 2012, Holt et al., 2010, Légaré et al., 2007, Lemay et al., 2011, Nieper, 2005, Niva, 2006, Patch et al., 2005, Reedy et al., 2005, Tyler et al., 2008, Tyler Jr et al., 2009, French et al., 2008, Eliason et al., 1999, Neuhouser et al., 1999, Vella et al., 2014)</p>	<p>High confidence</p>	<p>14 studies of mainly moderate quality. Rich, coherent and relevant data from many studies across population with different health conditions.</p>

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15	<p><b>Facilitator, barrier and important factor: Consultation with healthcare professional</b></p> <p>Across many studies of participants with different health conditions, they desire consultation with healthcare profession and would follow the advice. However, consumers found they were unable to discuss with close-minded healthcare professionals which prevented the use of nutraceuticals.</p>	<p>(Arcury et al., 2005, Hall et al., 2003, Holt et al., 2010, Lee et al., 2013, Murray et al., 2008, Pally et al., 1984, Patch et al., 2005, Pike et al., 2013, Samuels et al., 2012, Blendon et al., 2013, Caldentey et al., 2013, Krumbach et al., 1999, Légaré et al., 2007, Tyler et al., 2008, Tyler Jr et al., 2009, Yoon and Horne, 2004, Tangkiatkumjai et al., 2014a, Arranz et al., 2012, Bruno and Ellis, 2005, Klafke et al., 2012, Okleshen Peters et al., 2004, Page et al., 2015, Petróczi et al., 2007, Rausch et al., 2011, Schoenberg et al., 2004, Schultz et al., 2011)</p>	High confidence	26 studies of mainly moderate quality. Rich, coherent and relevant data from many studies across population with different health conditions.
16	<p><b>Facilitator: Family and friends</b></p> <p>The influence of family and friends motivated consumers to take nutraceuticals including their recommendation to use, family tradition or culture.</p>	<p>(Barnes et al., 2016, Crawford et al., 2010, Krogstad et al., 2007, Miller and Russell, 2004, Nakanishi, 2014, O'Dea and Rawstorne, 2000, Patch et al., 2005, Pike et al., 2013, Suryani, 2015, Tangkiatkumjai et al., 2013)</p>	High confidence	10 studies of mainly moderate quality. Rich, coherent and relevant data from many studies across population with different health conditions.
17	<p><b>Facilitator: Attitude towards recommendation from mass media</b></p> <p>Consumers with positive attitude towards mass media were motivated by</p>	<p>(Miller and Russell, 2004, Nakanishi, 2014, Sinha and Efron, 2005, Arcury et al., 2005, Patch et al., 2005)</p>	Moderate confidence	5 studies of moderate and low quality. Coherent and relevant data from several studies.

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	advertisement and lay publication and vice versa.			
18	<p><b>Facilitator, barrier: Other sources of recommendation</b></p> <p>Other sources of recommendation motivated consumers included health store staff and coach. Consumers also chose to use or avoid nutraceuticals following the teaching of religion.</p>	(O'Dea and Rawstone, 2000, Krumbach et al., 1999, Ibrahim et al., 2016, Ibrahim et al., 2014, Krogstad et al., 2007)	Moderate confidence	5 studies of moderate and low quality. Relevant data from several studies.

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\* The assessment consisted of four domains including methodological quality of primary studies, the relevance of body of evidence contributing to the context of review question, the coherence of the review findings, and the adequacy of data supporting the review finding.