Chapter 3. Country-wise Analysis – Brunei Darussalam

3.1. Brunei Darussalam

The following table outlines the current state of Brunei based on indicators for national statistics, gender and ICT:

Indicator	
Basic Information	- Data
1. Country name	Brunei Darussalam
2. Area (km²)	5,765
3. National population	417800 (2013 World Bank) ⁱ
4. Rural population	23.3% or 97395 (2013 World Bank) ⁱⁱ
5. Key Economic Sector(s)	Oil and Gas
6. Industry (%)	68.2% of GDP (4Q2013, DEPD Quarterly GDP, p9) ⁱⁱⁱ [13,755.7/GDP20,157.7]
6-1. Agriculture (%)	0.2% (4Q2012, DEPD Quarterly Statistical Indicators, p14) ⁴ [37.7/GDP21,185.1]
6-2. Fisheries (%)	0.2% (4Q2012, DEPD Quarterly Statistical Indicators, p14) ^{iv} [52.7/GDP21,185.1]
6-3. Livestock industry (%)	0.3% (4Q2012, DEPD Quarterly Statistical Indicators, p14) ⁴ [56.8/GDP21,185.1]
6-4. Other sector (%)	Services: 31% (4Q2013, DEPD Quarterly GDP, p9) ³ [6,255.7/GDP20,157.7]
7. GDP per capita	US\$38,563.30 (2013 World Bank) ^v
8. Employment (%)	62% (2012 World Bank) ^{vi} [Out of employable population (15+)]
8-1. Employment - Urban (%)	-
8-2. Employment - Rural (%)	-
Gender	
1. Education (% of female)	
1-1. Primary education (% of female)	48.4% (2012, UNESCO Institute for Statistics) ^{vii} [% of students in primary education who are female]
1-2. Secondary education (% of female)	48.5% (2012, UNESCO Institute for Statistics) ⁷ [% of students in secondary education who are female]
1-3. Higher education (% of female)	61.9% (2012, UNESCO Institute for Statistics) ⁷ [% of students in tertiary education who are female]
2. Literacy (% of female)	93.7% (2012, UNESCO Institute for Statistics) ^{viii} [% of females 15+]
3. Labor Force Participation (% of female)	56.4% (2011, DEPD BDSYB 2011, p34) ^{ix}
3-1. Labor force in agriculture (% of female)	1.0 % (2010, DEPD BDSYB 2011, pp46-47 & 55) ⁹ [% of employed females in agriculture, forestry and fishery – livestock is included in agriculture) [529/(31629FemalesInPrivateSector + 23906FemalesInGovernment)] = 529/55535
3-2. Labor force in fisheries (% of female)	See 3-1
3-3. Labor force in livestock industry(% of female)	See 3-1

3-4. Labor force in other sector (% of female)	Wholesale and retail trade: 14.9% [8280/55535] Accommodation and Food Service: 9.2% [5085/55535] Manufacturing: 7.1% [3934/55535] Government: 43.0% [23906/55535] (2010, DEPD BDSYB 2011, pp46-47 & 55) ⁹
ICT	
1. Telephone lines (%)	14.18% (2013, Brunei ICT Indicators 2006-2013) ^x
1-1. Telephone lines - Urban (%)	-
1-2. Telephone lines - Rural (%)	-
2. Cell phone subscriptions (%)	115.41% (2013, Brunei ICT Indicators 2006-2013) ¹⁰
2-1. Cell phone subscriptions - Urban (%)	-
2-2. Cell phone subscriptions - Rural (%)	-
3. Internet use (%)	64.5% (2013 World Bank, World Development Indicators) ^{xi} [Individuals who have used the Internet in the last 12 months, Internet users per 100 people]
3-1. Internet use - Urban (%)	-
3-2. Internet use - Rural (%)	-
3-3. Internet use - Women (%)	-
4. Households with internet access	52,682 subscribers (2013, Brunei ICT Indicators 2006- 2013) ¹⁰ [including businesses and government sector]
4-1. Households with internet access – Urban (%)	-
4-2. Households with internet access – Rural (%)	-
5. Telecenter	-
5-1. The number of telecenters - Urban	-
5-2. The number of telecenters - Rural	-

3.1.1. Current Status of e-Services

Electronic services or e-services constitute the delivery of services mediated by technology^{xii} via channels like the internet, mobile phones, telephones and public kiosks and differ from traditional websites which offer only descriptive information.^{xiii}

In Brunei, while banks offer e-Banking and e-Payment facilities, e-Services in the government sector are still at its infancy. A budget of more than \$900 million in the Eighth National Development Plan 2001-2005 was allocated to develop an e-Government framework for the country in a "new public management" and "reinventing government" drive to streamline and improve the efficiency of government and its delivery of services to the public^{xiv}. To date, government websites offer mainly descriptive information. There is still room for Brunei to improve its G2B (Government to Business) and G2C (Government to Citizens) components of e-Government and to improve its rankings in terms of e-Government readiness.

Another initiative to improve connectivity and deliver telephone and broadband services, the FTTH or Fibre-To-The-Home project was implemented with the aim to connect up to 80% of residential premises with high speed broadband (HSBB) internet access by 2014^{xv} , replacing the older copper cable with fibre optic cables. This was carried out by Telekom Brunei Berhad (TelBru)^{xvi}, a leading service provider for fixed lines, internet and broadband services, leased lines and data services. As of November 2013, TelBru has connected close to 12,000 homes in Brunei.

In terms of ICT penetration at the individual level, Bruneians are getting increasingly connected as internet penetration continues to rise, recorded at 60.3% in 2014 by the Global Information Technology Report produced by the World Economic Forum (WEF). The indicators used for measurement include the number of mobile phone subscriptions, number of individuals using the internet, number of households with a personal computer, number of households with internet access and subscriptions for fixed and mobile network, and the use of social networks at the individual level. In 2012, Brunei ranked top in Asia in terms of facebook usage viii and second after Singapore in terms of iPad friendliness.

The role of social media as an enabling environment for e-Services should not be underestimated. Organisations in the government and private sector have expanded their web presence through their official websites as well as through social media platforms such as facebook, twitter and instagram. In the social media sphere, there are also many support groups, especially for health related issues such as cancer awareness and breastfeeding. In recent years, there is a marked increase of small businesses selling online via social networks. Most of these small businesses are owned by Bruneian women. Not only can they reach a wider range of customers, locally and abroad, but also many of them do not need to rent physical shop space to sell their goods and services.

However, there is a fine line between casualness and formality when using the social media platform for e-Services. The government and private sector organisations still need to strengthen their official websites in offering not only descriptive information but also provide functions or e-services which best serve the community.

3.1.2. Country Specific (Potential) Demand for e-Services

In an initiative to identify e-services perception and usage of ASEAN women and their needs to promote their livelihood, the Asia Pacific Women's Information Network Centre (APWINC) of Sookmyung Women's University of Korea with the support of ASEAN and the Ministry of Foreign Affairs (MOFA), Korea, recently invited member countries of ASEAN to participate in a project entitled 'Development and Delivery of Livelihood-based e-Service for ASEAN Women'.

As with its ASEAN counterparts, Brunei's contribution was in terms of a recent survey on 100 Bruneian women and an analysis report based on the survey. The study first involved administering a questionnaire prepared by APWINC to a random sample of the local female population. The condition was that the respondent must be at least 18 years old and knows how to access and use the internet. The questionnaire was disseminated mainly via email, facebook and face-to-face. Snowball sampling was used to reach out to a more diverse range of Brunei women. The majority of the questionnaires were self-completed.

The main findings of the survey are presented in the following sections dealing with the respondents' details, their familiarity with the internet, perception and usage status of e-services and their needs of e-services.

3.1.2.1 Respondents' Details

In this section, we will show the demographic characteristics of the sample of 100 Brunei women who participated in the survey. All the women in the sample know how to use the internet and are internet users.

The following subsections summarise the residing districts, age, marital status, education, occupation and total monthly household income of the respondents.

3.1.2.1.1 District of Residence of Respondents

The majority of the respondents reside in the Brunei Muara district, which is the most densely populated district of Brunei and which is where the capital, Bandar Seri Begawan, is located, with a few of the participants living in the Belait and Tutong districts (see Figure 1).

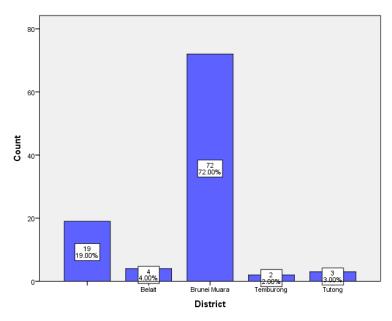


Figure 1. Distribution of Sample by District/Province

3.1.2.1.2 Age Groups of Respondents

The majority of the respondents are youth in the age group of 20 to 30 years old, with the smallest size being the age group of 51 years and above (see Figure 2).

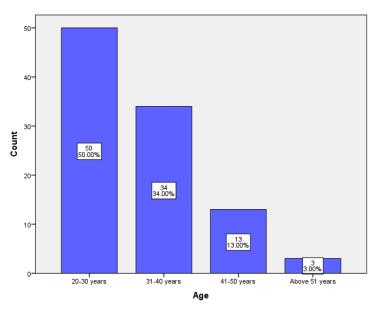


Figure 2. Age Distribution of Sample

3.1.2.1.3 Marital Status of Respondents

Figure 3 shows that there is an even distribution of single and married women in the sample. The questionnaire did not distinguish between unmarried single women and single mothers. It was noted that there is a small number of women who are single with children.

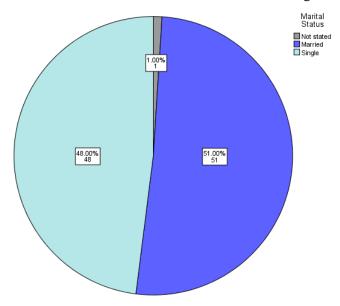


Figure 3. Marital status distribution

3.1.2.1.4 Education Level of Respondents

Figure 4 shows a distribution of the sample by the level of education. We observe that the majority of the respondents hold a bachelor's degree or above. In a closer look at the 'others' category, it is noted that many of them hold professional qualifications, diplomas, higher national diplomas or even a doctorate.

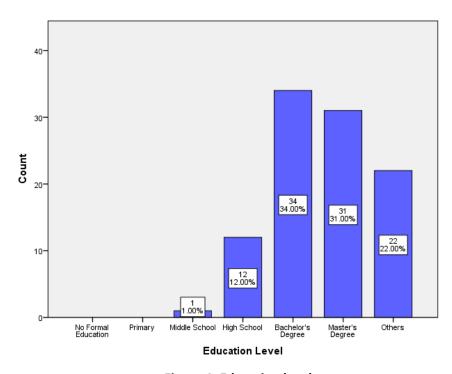


Figure 4. Education level

3.1.2.1.5 Occupation Types of Respondents

Figure 5 shows a distribution of the sample by occupation. Over 70% of the women in the sample are employed with a small proportion who are still studying or self employed. Only one respondent is a full-time housewife.

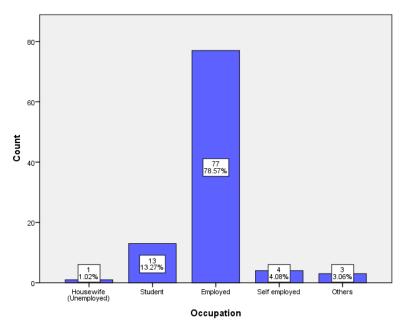


Figure 5. Types of Occupation

3.1.2.1.6 Total Monthly Household Income of Respondents

About 23% of the respondents did not disclose their total monthly household income. With a response rate of 77%, the average household income per month is estimated at US\$4300. 30% of the respondents fall in the US\$2000 per month category, with a small proportion enjoying an average household income per month of over US\$10,000 (see Figure 6).

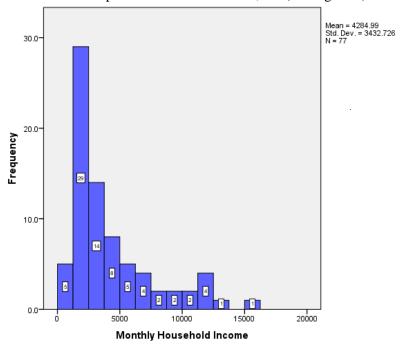


Figure 6. Total Monthly Household Income

3.1.2.2 Respondents' Familiarity with the Internet

In this section, information were gathered on how familiar the respondents are in using the internet, their patterns and purposes of usage.

3.1.2.2.1 Ease of Internet Access

About 97% of the respondents have easy access to the internet (see Figure 7).

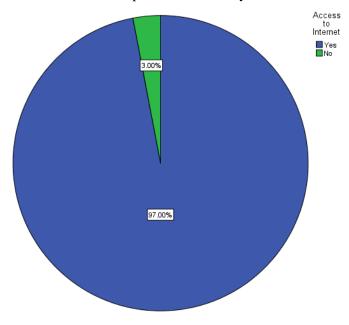


Figure 7. Ease of Access to the Internet

3.1.2.2.2 Where to Access the Internet

The respondents mainly access the internet from home or at work, with a small number accessing the internet at cybercafés, public facilities and schools (see Figure 8).

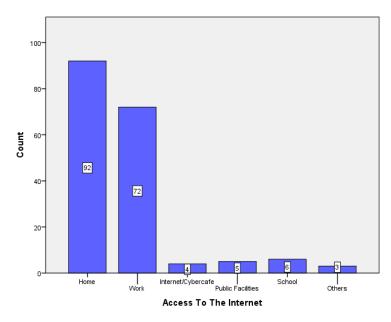


Figure 8. Places to Access the Internet

3.1.2.2.3 Frequency of Internet Usage

Figure 9 shows the frequency of internet usage by the respondents. Over 90% claim to be using the internet daily with nearly 50% saying that they use it several times a day. Only a small number of the sample, of around 3%, say they use it infrequently at two to three times a week.

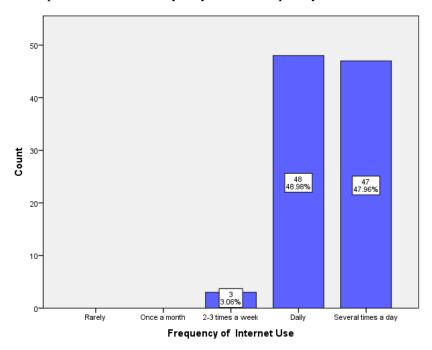


Figure 9. Frequency of Internet Use

3.1.2.2.4 Purposes of Internet Usage

The two main purposes of using the internet are to search for information and online communication while a small number access the internet for buying online and music and entertainment purposes(see Figure 10).

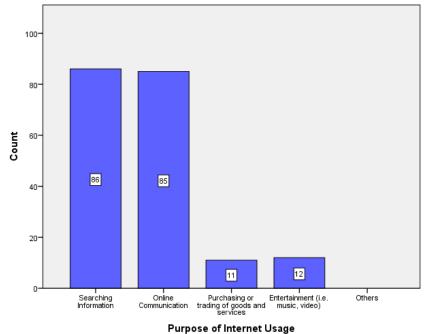


Figure 10. Purpose of Internet Usage

3.1.2.2.5 Types of Websites Most Visited

The types of websites most frequented are social networking sites, such as Facebook, and for personal use such as blogging and emailing (see Figure 11). Search Engines prove to be the third most frequented sites in the search of information. Surprisingly, news sites and school websites are the least frequented although these sites are expected to be most informative on world affairs, education, teaching and learning.

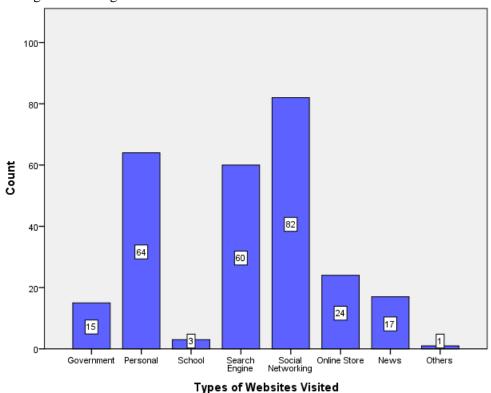


Figure 11. Types of Websites Visited

3.1.2.3 Respondents' Perception and Usage Status of e-Services

In this section, information were gathered to gauge the perception and usage by the respondents on women-related eServices in Brunei.

3.1.2.3.1 Awareness of Government Websites

When asked if they are aware of any government websites providing women related information or programmes in Brunei, the majority, at nearly 80%, say that they are not aware – See Figure 12.

About 17% of the respondents say that they are aware of such government websites and listed some as follows:

- ebunda.org
- iwcbrunei.org
- Brunei Breast Cancer Support Group on Facebook

- womencouncil.org.bn¹
- Women Services http://japem.gov.bn/perkhidmatan/women.htm
- abacwomen.org
- Ministry of Health Health Promotion Centre
- Ministry of Health Department of Medical Services
- The Brunei Council on Social Welfare^{xx}
- Public Service Department, Prime Minister Office
- Brunei Economic Development Board or BEDB's Micro Enterprise Development Scheme xxi

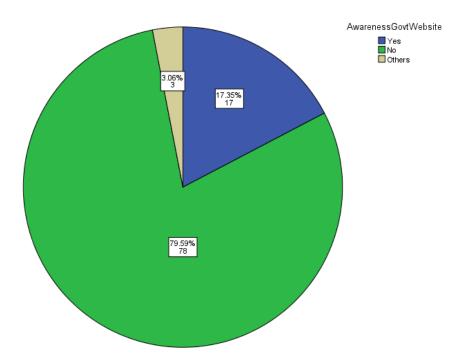


Figure 12. Awareness of Government Websites on Women-related Information

The majority of the respondents listed "eBunda", which was developed by BAG Networks, a joint-venture and leading IT consulting and outsourcing services provider in Brunei.

Some respondents also listed the Ministry of Health's Health Promotion Centre and the Department of Medical Services, The Brunei Council on Social Welfare, and the Public Service Department of the Prime Minister's Office, although these sites are not dedicated to women, but for the public in general. Two respondents listed the International Women's Club of Brunei although in the strict sense, this is not a government website. The site 'abacwomen.org' is not a local website.

Another site that was also mentioned was the Brunei Economic Development Board^{xxii} or BEDB's Micro Enterprise Development Scheme which supports women entrepreneurs in setting up small businesses such as salons, bakeries and tailoring.

¹ The Council of Women in Brunei Darussalam (CWBD) site 'womencouncil.org.bn' has been replaced by http://www.mwbd.org/.

3.1.2.3.2 Visits to Government Websites

When asked if they have ever visited the websites they mentioned, 61% claimed that they have, with 33.3% claiming that they have but they couldn't remember (see Figure 13).

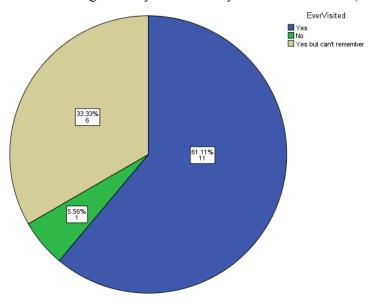


Figure 13. Visiting Government Websites on Women-related Information

3.1.2.3.3 Level of Satisfaction

Of the 61% or 11 participants who visited the websites, the majority of them were somewhat satisfied, as shown on Figure 14.

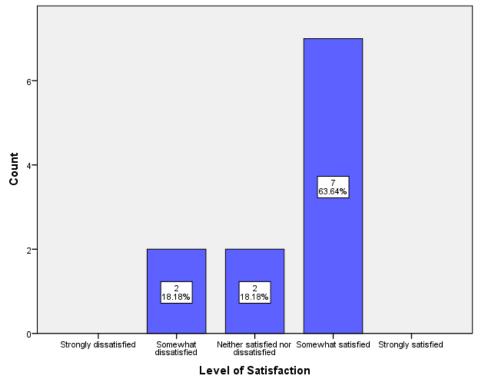


Figure 14. Level of Satisfaction of Government Websites on Women-related Information

For those who were not satisfied, the reasons were that the sites were seldom updated and the existing information on the sites were not inspiring nor motivating. Of those who were satisfied, a reason that was stated was that the site was useful for gathering information. There was no mention about sites which offered e-services or interactive functions.

3.1.2.3.4 Development of new e-Services

When asked if the respondents agree with the idea that the development of e-services in their daily lives could improve their lives, the majority agreed – around 30% strongly agreed and around 50% somewhat agreed (see Figure 15).

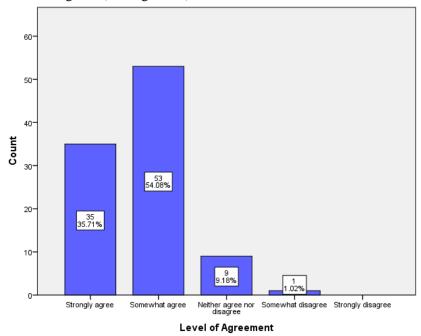


Figure 15. Level of Agreement on the Development of e-Services for Improving Life

3.1.2.3.5 Awareness of Government Policies

When asked if they were aware of any government policies to support women's e-Services in Brunei, over 80% claimed that they were not aware (see Figure 16).

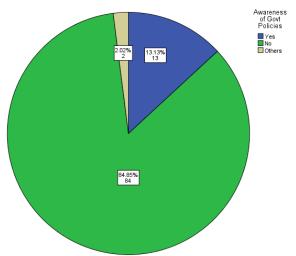


Figure 16. Awareness of Government Policies for e-Servcies for Women in Brunei

3.1.2.4 Respondents' Needs of e-Services

This section shows how crucial different categories of information and functions of a new e-service would be to the respondents. Statistical T-tests were used to test out a few hypotheses in order to determine whether there was any significant difference between how crucial a category of information would be and the various respondent details gathered.

Figure 17 shows a list of e-Services which the respondents would find it crucial to have information on. Amongst those which ranked the highest are information on free health clinics, immunization, maternity and sanitation followed closely by information on childcare, domestic/sexual violence or abuse prevention, job opportunities and vocational training. The respondents did not find it crucial to have information on micro-financing, bidding opportunities or livelihood related activities, such as agriculture, fishery, and livestock.

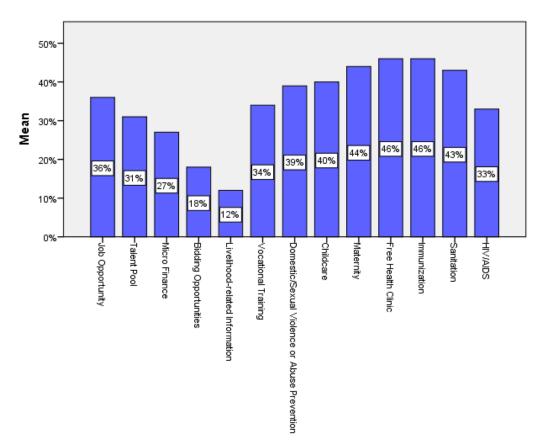


Figure 17. Crucial Information on e-Services

Figure 18 shows a list of functions which the respondents would find crucial to have on an e-Servcie platform. The functions which ranked highest as being most crucial to have are mobile access, online registration, and form and document downloads. Bulletin boards and ombudsman functions ranked the lowest.

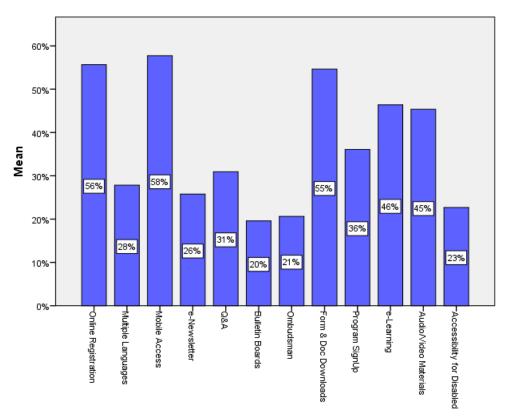


Figure 18. Crucial Functions of e-Services

Three hypotheses were tested:

- a. Women with a higher number of children would consider it crucial to have information on maternity;
- b. Married women with no children would consider it crucial to have information on maternity;
- c. Mothers with younger children would consider it crucial to have information on childcare.

In testing out the first hypothesis, Figure 19 shows some association between the number of children and information on maternity, indicating that women who find it crucial to have information on maternity on average have less children at 0.841 than women with more children at 1.196 on average. However, a T-test on relationship shows no significant difference at 95% confidence level. This means that we cannot infer that the more children a woman has, the more crucial she would rate information on maternity to be. Maternity is concerned with the period during pregnancy and shortly after childbirth. A possible reason could be that women with more children would already be experienced in maternity and motherhood and would therefore not actively seek to find new information on maternity, as opposed to new mothers or mothers-to-be.

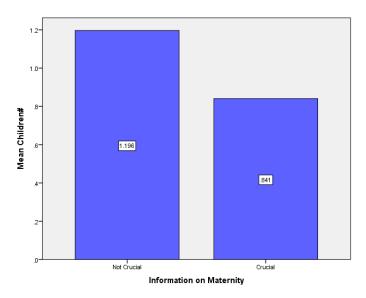


Figure 19. The number of children and Information on Maternity

In testing out the second hypothesis, Figure 20 shows some association between married women with no children and information on maternity. 82% of married women with no children find it crucial to have information on maternity, as opposed to only 39% of single or married women with children. A T-test on relationship found that the difference was statistically significant at 99% confidence level. It can therefore be inferred that married women with no children would consider it crucial to have information on maternity and this might be especially true for married women with no children but plan to have children.

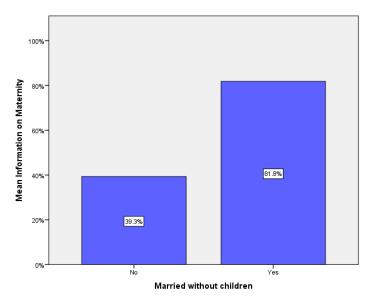


Figure 20. Married Women with No Children and Information on Maternity

In testing out the third hypothesis, Figure 21 shows some association between the age of the youngest child and information on childcare. Mothers who find it crucial to have information on childcare have an average age of their youngest children at 3.71 years old while mothers who do not find it crucial to have such information have an average age of their youngest children at 6.39 years old. A T-test on

relationship found that the difference was statistically significant at 95% confidence level. This means that the younger the youngest child is, a mother would find it more crucial to have information on childcare. This might hold true especially for working mothers with no domestic help who would want to seek information such as availability and quality of childcare centres near their homes or workplaces and the minimum age of enrolment.

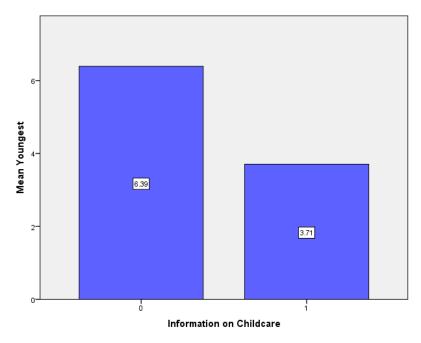


Figure 21. The Age of Youngest Child and Information on Childcare

3.1.3. Future Directions of e-Services

The study identified some existing websites for Bruneian women – see Table 1. Most of these sites, if not all, on women-related issues hold descriptive information with no interactive e-services.

There are many women associations and welfare bodies in Brunei representing the interests of women from all walks of life and line of work. For example, The Council of Women of Brunei Darussalam (CWBD) xxiii is an overarching body for thirteen member associations. Most of these associations have yet to establish a strong web presence and develop up to the scale of providing e-services to the Bruneian women communities.

In waiting for such e-services to become available, many Bruneian women have resorted to creating support group sites via social media for health-related issues such as breastfeeding and cancer awareness.

Application Areas	Current e-Services
General Policy Outreach	International Women's Club of Brunei:
	http://www.iwcbrunei.org/
	Women Services, Community Development Department
	(JAPEM), Ministry of Culture, Youth and Sports:
	http://japem.gov.bn/perkhidmatan/women.htm
Women's Health	• eBunda: http://eBunda.org
	Brunei Breast Cancer Support Group:
	http://pinkribbonbrunei.blogspot.com/
	https://www.facebook.com/pages/Brunei-Breast-Cancer-
	Support-Group/118950751450862
	Brunei Breast feeding support group on facebook:
	https://www.facebook.com/groups/bruneibreastfeedingmom
	mies/
	Brunei Women's Health on facebook (closed group)
	https://www.facebook.com/groups/kesihatanwanitakitani/
	On Raising Sons on Facebook (closed group)
	https://www.facebook.com/groups/raisingsons/
Women's Economic	The Council of Women in Brunei Darussalam (CWBD)
Participation	http://www.mwbd.org/
	with its member associations xxiv
	PERTIWI: Pertiwi Association
	• WI: Women's Institute of Brunei Darussalam
	PANDU PUTERI: Girl Guides Association of Brunei Darussalam.
	BAKTI: Welfare Association of Wives of the Brunei
	Darussalam Armed Forces.
	 BISTARI: Welfare Association of Wives of Brunei Darussalam Government Officers
	PKP: Women Welfare Association of Belait District
	PGGMB: Brunei Malay Teachers' Association (Women
	Section)
	PSW : Women Graduates Association
	PERGANITA : Confederation of Women Welfare
	Association of Tutong District
	BAKANITA: Welfare Association of Women of Lambak Kanan National Housing
	Kanan National Housing • PERBEKAL: Youth Association of Kampong Lambak
	(Women's Section)
	PEWAJA: Women Association of Kampong Junjongan
	PNI : Nurul Islam (Women Islamic Sisters) Association
Gender Policy Monitoring	Statistics from Brunei Department of Economic Planning and Dev
	elopment (<u>www.depd.gov.bn/</u>) and Authority for Info-
	communications Technology Industry (www.aiti.gov.bn/) 1 Evamples of e-Service areas

Table 1. Examples of e-Service areas

There were many recommendations elicited from the survey:

- a. A need for a one-stop agency for the public, and not just for women, for a host of government eservices such as enquiries, renewal of licenses, registration, payments in areas such as vehicle road tax, driving licenses, insurance, health checks and appointments and immigration services.
- b. A need for a dedicated e-services platform or single portal on women e-services in Brunei with ubiquitous and reliable access.
- a. A need for the portal to be informative, interactive, user friendly, updated, efficient, secure, with quick response times.
- b. A need to promote and raise awareness of existing websites on women-related issues.
- c. To learn from practices outside Brunei e.g. Singapore Health Promotion Board^{xxv} and Australian Breastfeeding Association^{xxvi} and the UK Women's Aid.^{xxvii}
- d. A need to periodically evaluate such e-Services and look for areas of improvement.
- e. A recommended list of e-services for women and the public in general:
 - Health Cancer awareness for women, online access to health clinics, appointments, doctor's consultations, breastfeeding, vaccines to prevent cervical cancer, when to do tests, support groups for rare illnesses such as polycystic ovarian syndrome (PCOS)
 - Women community support groups fundraising, to help families in need, where to seek help or report on domestic and sexual abuse, and where to find religious events and activities.
 - Leadership programmes for women
 - Busy mothers tips, daycare centres, immunisation for babies, health clinics
 - List of women-related NGOs, community based activities for women
 - Small businesses to support women entrepreneurs on areas such as obtaining finance, writing business proposals, keeping accounts, and tips on how to sustain their businesses in the face of competition

There is thus a strong need for e-services to address the different needs of Bruneian women, especially in the areas of health, welfare and development. There is much that can be done to develop a spectrum of women-related e-services to serve the female community in Brunei.

References

(link to 'Literacy Rate' & indicator e.g. 'Adult Literacy Rate, Population 15+ years, female')

- ^{xii} Rowley, J. (2006) An analysis of the e-service literature: towards a research agenda. Inter net Research, 16 (3), pp.339-359
- yiii Jeong C.H. (2007). Fundamental of Development Administration. Selangor: Scholar Press. <u>ISBN</u> 978-967-5-04508-0
- xiv http://www.bt.com.bn/focus/2008/07/03/e government in brunei where do we stand now
- ** http://www.bt.com.bn/business-national/2014/03/22/ftth-2014-target-80-minister

https://www.facebook.com/permalink.php?story_fbid=207771319329282&id=244617012290086

- http://www.brusearch.com/news/112050
- xx www.mkmbrunei.com
- www.bedb.com.bn/bisop_devlocalbusiness.html
- xxii http://www.bedb.com.bn/
- xxiii http://www.mwbd.org/
- http://www.mwbd.org/#!members/c1pid and http://www.mwbd.org/#!members-info/c1huv
- xxv http://www.hpb.gov.sg/
- http://www.breastfeeding.asn.au/
- xxvii http://www.womensaid.org.uk/

http://data.worldbank.org/country/brunei-darussalam

http://data.worldbank.org/indicator/SP.RUR.TOTL

http://www.depd.gov.bn/gdp/2013/Q4_2013.pdf

iv http://www.depd.gov.bn/SI/BDSYB2012/BDQSIQ4 2012.pdf

^v http://databank.worldbank.org/data/home.aspx (GDP per capita (current US\$))

vi http://data.worldbank.org/indicator/SL.EMP.TOTL.SP.ZS/countries - Employment to population ratio, 15+, total (%) (modeled ILO estimate)

http://www.uis.unesco.org/DataCentre/Pages/BrowseEducation.aspx (link to 'Education full set' & indicator e.g. % of students in tertiary education who are female)

http://www.uis.unesco.org/DataCentre/Pages/BrowseEducation.aspx

http://www.depd.gov.bn/SI/BDSYB2011/BDSYB 2011.pdf

^{*} http://www.aiti.gov.bn/Statistic/Pages/default.aspx

http://databank.worldbank.org/data/home.aspx (choose indicator as 'Internet users (per 100 people)')

xvi http://www.telbru.com.bn/

http://www.bt.com.bn/business-national/2014/05/07/060514-kjs-gitrindvuse