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EDITORIAL

Editor's comment

This issue of the International Journal of Home Economics showcases an eclectic range of home economics research, highlighting the nature of the field in its full diversity. This range is across disciplinary fields, ranging from textiles and pattern production to nutrition for newly settled migrants, housing and family formation and curriculum, along with other aspects of the field. As always the publications highlight wellbeing of individuals and families as a central concern.

The Editorial Board of the journal is undergoing renewal and in subsequent editorials I will be sharing information about our Board members.

This issue also introduces two new members of the editorial board:

Assistant Professor Kerry Renwick from the University of British Columbia

<http://edcp.educ.ubc.ca/faculty-staff/kerry-renwick/>

Dr Kerry Renwick has teaching experience in Australian secondary schools in the government, catholic and independent systems in the State of Victoria, Australia; in vocational education and training; and higher education. Kerry also has experience working in public health nutrition with Statewide responsibility for nutrition education in P-12 schools. Within her role at Victoria University, Kerry successfully introduced Home Economics as a secondary specialisation for pre-service teachers. She has undertaken leadership in teacher professional associations including roles President, Treasurer and Editor of journals. Kerry holds the position of Vice President, Pacific Region, for the International Federation of Home Economics (IFHE) 2018 - 2020.

Adjunct Professor Peggy M. O'Neil from Brescia University College

Dr O'Neil worked as an educator and leader in health care for twenty years; and during the past five years, she has worked as a business development consultant to leaders in residential real estate brokerages across North America. She has been faculty at Brescia University College in Food Administration since 2008. The focus of her doctoral work and on-going research is women entrepreneurs in fields related to home economics. Peggy is in the process of launching her arts and entertainment company, called *The Song Inside*, that produces radio and television programs for women and entrepreneurs, with the purpose of helping individuals have more of the life they want by understanding how economics and ethics fit together.

Professor Donna Pendergast

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Call for Editorial Board Members

Given the growth in the IJHE and the need for high quality reviewers, I invite you to submit an Expression of Interest for Membership of the IJHE Editorial Board. Please provide a brief Resume providing the following information:

- qualifications
- professional employment experience
- publications record; editorial board experience
- IFHE region membership
- home economics fields of expertise.

Please ensure the Criteria for Board Membership listed below are met prior to submitting your application to avoid disappointment. A maximum of five pages is required, submitted to: intjournalhomeeconomics@gmail.com

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- Must be a productive and respected researcher with expertise in one or more research methodologies and one or more Home Economics specialisations.
- Must have a background in research including doctoral degree and have published in refereed journals.
- Must have current membership of IFHE or willingness to join during tenure on the Editorial Board.

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REFEREED PAPER

Technology choices in Nigerian textile industry

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Abstract

The study examined technological choices available in the Nigerian textile industry and assessed factors influencing the choices. Three states (Lagos, Kano and Kaduna) where there is active textile production were purposively selected. All 18 textile firms in the states made up the sample for the study. Data were collected using structured questionnaires and interviews. The results showed that the majority of the textile firms chose Sulzer (44.4%) and Alpha circular machines (16.7%) for their weaving operations. Dyeing was carried out with Jumbo jet machines (33.3%) while printing operations were done with OBEM (27.8%) and Flexo machines (11.1%). The results further revealed that access to loans ($r = 0.523$, $p < 0.05$), complexity of the technology ($r = 0.542$, $p < 0.05$), compatibility ($r = 0.484$, $p < 0.05$), labour ($r = 0.686$, $p < 0.01$), and location of the firms ($r = 0.775$, $p < 0.010$) were the main factors that significantly influenced technology choices in weaving, printing, dyeing, and finishing. It is recommended that the use of modern machines and software be adopted by textile firms in Nigeria.

KEYWORDS: CHOICES, PRODUCTION, TEXTILE, WEAVING, TECHNOLOGY

Introduction

Globally, the textile industry is strategic to the nation's overall industrialisation efforts and is imperative in the advancement of social, economic and industrial activity of many nations (Akalin, 2001). Textile manufacturing involves the use of technology to make textile products for human, industrial and household consumption. These textile products are in daily use and can be in the form of clothing, apparel and furnishings (Diyaolu, 2016). The demand for labour and machinery in the industry is high, making it a source of employment and income generation.

Over the years, the Nigerian textile industry has been experiencing challenges hindering effective operations (Makinde, Fajuyigbe, & Ajiboye, 2015). Most of these challenges are smuggling of finished fabrics, low level of power supply, low patronage and raw material acquisition among others (Gherzi, 2013). There has been no detailed study on the choice of technology used in manufacturing among firms and factors influencing the choices (Varukolu, 2007). The technology chosen in the production of textiles ultimately affects the quality, cost and delivery of the products (Besterfield, Besterfield-Michna, Besterfield, & Besterfield-Sacre, 2003). The inability of Nigerian textile firms to purchase new and automated machinery can contribute to low-level operations in the industry. Furthermore,

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while advancements in textile manufacturing in developed countries like China and United States of America are tending towards nanotechnology and smart textiles (Berglin, 2013), textile firms in Nigeria are yet to follow this trend.

Technology has emerged as an important determinant of competitiveness in the increasingly globalised and knowledge-based economy. The technology, which may be hardware (in the form of machines) or computer software, aims at enhancing better, faster and safer production methods while achieving the goal of consumer satisfaction (Bayazit, 2003; Demirbag, Tatoglu, Tekinkus, & Zaim, 2006). The types of machine selected for any of the operations, such as weaving, spinning and dyeing, impacts greatly on the quality of the output. This can affect patronage, profitability and performance in the industry. It is, therefore, crucial to choose the right technologies that meet the needs of the organisation.

The size of the firm affects the choice of technology. Smaller firms may not have the financial and human resources to afford complex systems. Thus, it is necessary for textile firms to remain competitive by applying new technological innovations in design and manufacturing as well as providing good quality products for customers' satisfaction. Gherzi (2013) opined that there is an urgent need to assess the viability of technology employed in production among textile firms in Nigeria. This study, therefore, examined the technology choices in production among textile firms in Nigeria and assessed the factors influencing the choice of technologies employed in the industry.

Methodology

The population of the study consists of all textile manufacturing firms in Nigeria. According to the Nigerian Textile Manufacturers Association (2014), out of 33 existing firms, the majority are located in Lagos, Kano and Kaduna States. Therefore, purposive sampling was used to select these three states for the study. All the firms in Lagos (10), Kano (7) and Kaduna States (1) were selected, making a total of 18 firms. General managers and production managers in all the firms completed the questionnaire to obtain relevant information on the choice of technology used. These managers are believed to have a broad range of knowledge and to be pivotal in technology choices and decision-making in the industry. Data were collected and analysed using SPSS. Percentages were used to describe the technology choices while bi-serial correlation and regression were used to examine the relationships among the selected factors and technology choices. All analysis was carried out at 5% level of significance.

Results

Choice of machines used for textile production in Nigeria

The results in Table 1 show the machines used in the firms for production processes. Most of the firms (44.4%) used Sulzer weaving machines while others used Kapps weaving machines (16.7%) which is an older model of weaving machine. About 33.3% carried out dyeing operations with Jumbo jet machines while 22.2% used winch dyeing baths. Manufacturers employed the use of Flexo printing machines (11.1%) and OBEM dyeing machines (22.2%). Knitting was achieved with Camber knitting machines (16.7%). The singeing finishing operation was achieved with the aid of Bailing and singeing machines (33.3%).

Table 1 Choice of machines used in production

Operations	Machines	Number of firms	Percentage
Weaving	Sulzer	8	44.4
	Kapps	3	16.7
	Alpha circular	3	16.7
Dyeing	Jumbo jet	6	33.3
	Winch dyeing bath	4	22.2
	Jigger jet	2	11.1
Printing	Flexo machine	2	11.1
	OBEM machine	5	27.8
	Rotary screen printing	2	11.1
Knitting	Camber machine	3	16.7

Operations	Machines	Number of firms	Percentage
Finishing	Matex Stenter	2	11.1
	Adstarkon 60	2	11.1
	Bailing and singeing	6	33.3
	Decartising machine	2	11.1

Choice of computer software

Table 2 reveals the choices of computer software used in the industry. The majority (83.3%) installed Numerical Control Machines and Statistical Process Control. Also, 50.0% employed the use of Computer Aided Design (CAD) in production. About 22.2% employed Computer Aided Manufacturing (CAM) in the industry. Automated Inspection is installed in 22.2% of firms. Most (88.9%) of the firms make use of Information and Communication Technology to communicate with clients. These include phone calls, internet and short message services.

Table 2 Choice of computer software used in the textile firms

Software	Number of firms	Percentage*
Computer Aided Designs	9	50
Computer Aided Manufacturing	4	22.2
Automated Inspection	4	22.2
Automated Material Handling Device	9	50
Numerical control machine	15	83.3
Statistical Process Control	15	83.3
Production Planning Software	11	61.1
Inventory management software	14	77.8
Information & Communication Technology	16	88.9

*Multiple responses

Correlation of technology choices of production process and factors influencing the choices

Table 3 shows the correlation between choice of technology for various processes and factors influencing the choice. Access to loans had a significant relationship with technology choices for dyeing ($r = 0.523$, $p < 0.05$), printing ($r = 0.523$, $p < 0.05$) and finishing ($r = 0.523$, $p < 0.05$). Complexity of technology had a significant relationship with technology choices for knitting ($r = 0.542$, $p < 0.01$) in the textile firms. Availability of labour was also significantly related to the choice of technology in weaving ($r = 0.686$, $p < 0.01$) and knitting ($r = 0.837$, $p < 0.01$) while size of the firm ($r = 0.542$, $p < 0.05$) and location ($r = 0.775$, $p < 0.05$) were significantly associated with technology choices in weaving and finishing, respectively.

Table 3 Correlation analysis of technology choices and factors influencing the choice

Variables	Weaving <i>r</i>	Dyeing <i>r</i>	Printing <i>r</i>	Knitting <i>r</i>	Finishing <i>r</i>
Awareness	0.193	-0.255	0.343	-0.106	-0.255
Access to loans	0.314	0.523*	0.523*	-0.51	0.523*
Level of effort	-0.065	0.269	0.269	0.277	0.269
Affordability	0.389	0.224	-0.151	0.238	0.254*
Perceived value	0.081	0.304	0.304	-0.158	0.304
Complexity	0.193	-0.255	0.255	0.542*	-0.255
Compatibility	0.484*	0.670**	0.670**	-0.400	0.670**
Observability	0.542	0.152	0.033	0.120	0.122
Labour	0.686**	-0.051	0.277	0.837**	-0.051
Size of firms	0.542	0.112	-0.255	0.120	0.122
Government policy	-0.378	0.081	-0.236	0.316	0.316

Variables	Weaving <i>r</i>	Dyeing <i>r</i>	Printing <i>r</i>	Knitting <i>r</i>	Finishing <i>r</i>
Market forces	0.293	0.255	-0.151	0.258	0.255
Age of firms	-0.107	0.215	0.107	0.196	0.244
Education	0.359	0.120	0.096	0.354	-0.027
Location	0.238	0.343	-0.106	0.102	0.775**

* $p < 0.05$; ** $p < 0.01$; r = correlation coefficient

Effect of factors influencing technology choices in textile industry

Table 4 presents the result of multiple linear regression analysis showing the relationship between choice of machines and the factors influencing the choices. There is a strong positive relationship between the choice of machines and the factors influencing the choice ($R = 0.980$). The factors that were in the model accounted for approximately 97% of the variance in the choice of machines (the coefficient of determination R^2 was 0.960). The result of Analysis of Variance revealed that the model is fit ($F = 13.057$, $p = 0.003$). Furthermore, awareness of new technology ($p > 0.05$), complexity of the technology ($p > 0.05$), age of the firm ($p > 0.05$) and educational qualification ($p > 0.05$) were not significant predictors of choice of machines.

However, access to loans was a significant predictor of choice of machines ($p < 0.05$). The coefficient for access to loans was 12.645 and this indicated that a unit increase in the access to loans will cause increase in the choice of machines by 12.645 unit, other factors held constant. The level of efforts to implement the technology was also a significant predictor of choice of machines ($p < 0.05$). The coefficient of determination was 11.275 implying that a unit increase in the level of effort to implement the technology will cause 11.275 increase in the choice of technology. Affordability (high cost of technology) was a significant predictor of choice of machines ($p < 0.05$). The coefficient for affordability was -32.713 and this indicated that a unit increase in the cost of the technology will cause 32.713 decrease in the choice of machines. Thus, when the cost of a new technology is high, firms might not be able to choose such technology.

Table 4 Regression Analysis of factors influencing choice of technology in Nigerian textile industry

Variables	Unstandardised Coefficients		Standardised Coefficients	T	p
	B	Std. Error	Beta		
(Constant)	98.047	4.604		21.294	0.000
Awareness of new technology	1.195	1.754	0.141	0.681	0.521
Access to loan	12.645	2.481	1.371	5.097	0.002
Level of effort to implement	11.275	1.754	1.331	6.427	0.001
Affordability	-32.713	6.379	-2.489	-5.128	0.002
Perceived value	-47.437	9.374	-2.631	-5.060	0.002
Complexity of the technology	0.092	1.308	0.011	0.070	0.946
Compatibility of the technology	-17.167	2.188	-1.728	-7.846	0.000
Observability with other technologies	9.925	1.754	0.999	5.658	0.001
Labour	0.667	4.133	0.161	0.877	0.001
Size of the firm	9.313	1.654	0.938	5.631	0.001
Market forces	11.018	4.492	0.994	2.453	0.05
Government policies on tax, importation	32.637	6.379	2.484	5.116	0.002
Age of firms	-0.333	4.133	-0.081	938.000	1.000
Education	0.083	1.200	0.230	0.418	0.691
Location	0.517	658.000	1.070	0.754	0.004

Note. Model Diagnosis: $R = 0.980$; R Square = 0.960, $F = 13.057$, $p = 0.003$

Discussion

The weaving machine most commonly used in the firms is the Sulzer weaving machine used for cotton weaving. This is a shuttle-operated machine that has a limitation in the fabric produced in metres per hour. According to ILO (2004), non-shuttle Sulzer machines weave 13.30 metres/loom/hour compared to shuttle looms that weave 5.36 metres/loom/hour. The rate of production between shuttle and non-shuttle looms dictate how efficient the firms are in meeting customer demands. Constant innovation and adoption of new technology is an essential element for competitive advantage in the global market as firms can maintain quick and flexible responses to market demand using the technologies (Özçelik & Taymaz, 2004).

Kapps weaving machine (shuttle) is used for the production of blankets and floor dusters. All major developments in weaving machinery have been geared towards increasing productivity, improving fabric quality and reducing the number of operations. This should reflect in the installed machines in the firms. Ibrahim, Hassan, and Sule (2013) classified weaving machines according to the methods of picking or weft insertion into projectile, rapier, and air-jet. Iteba America (2015) asserts that there are modern weaving machines that enhance better manufacturing in textile production. The weaving machines available in the firms are relatively cheap and not greatly demanding in technical supervision as ILO (2004) reported that air-jet weaving machines are too expensive, technically demanding and suitable for large-scale production.

Circular weaving machines are employed in weaving polypropylene bags (packaging sacks). The machine uses six shuttles and weaves quickly. Parisi (2014) observed that there are OBEM dyeing machines that are fully robotized, developed for wool, cotton, acrylic, polyester, viscose, and blends that require a limited number of operators.

The software technologies used in the firms include Computer Aided Design used among half of the firms. This is a part of Computer Integrated Manufacturing which reduces design cost. Computer Aided Manufacturing (22.2%) increases productivity and improves product quality. Computer Aided Design and Computer Aided Manufacturing offer broad capacity for textile designing and manufacturing by providing a wide application in the design of bed covers, towels, suiting, shirting and so on (Siemens, 2016). The use of this kind of software is uncommon in the Nigerian firms. Managers can also use statistical process control to evaluate the output of a process and determine its acceptability by taking periodic samples from the process and comparing with a predetermined standard.

Access to loans for making better choices of machines and software can positively impact the industry. Interest rates on available loans were reported to be too high, making it inaccessible to firms. The complexity of the technology to be chosen in the firm is another influencing factor. If there are no capable technical staff that are well-equipped to manage and maintain new technology, the firms will find it difficult to adopt the technology. The applicable technology should fit the existing production processes without requiring any major modification (Linstone, 1999).

Increased production capacity and increased customer loyalty are attested to by 27.8% each. This shows that the choices had little influence on the production capacity and customer loyalty. However, 61.1% and 33.3% of firms enjoyed improved productivity and improved quality respectively. It is believed that better choices will increase the productivity and quality. Cooper (1996) mentioned that successful manufacturing industries get more than 49% of their profit from new products differentiated by incorporating new technologies.

Conclusion

The technology used for weaving in textile firms in Nigeria is mostly Sulzer weaving machines. The use of Computer Aided Design and Computer Aided Manufacturing which should improve product quality is low. These choices are being influenced by the complexity of the technology, compatibility and ability of the firms to access loans. Textile firms in Nigeria should, therefore, choose more recent technology which will lead to better operations. In addition, there should be incentives from the government in the form of loans with low interest rates to the existing textile firms.

Biographies

Dr Diyaolu Idowu specialises in clothing and textile technology. He teaches clothing, textiles and interior decoration in the Department of Family, Nutrition and Consumer Sciences, Obafemi Awolowo University, Ile-Ife, where he conducts research on technology and its role in clothing and textile designs. ✉ diyaoluij@yahoo.com

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INTERNATIONAL FEDERATION
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REFEREED PAPER

Teacher competency in pattern-drafting lessons in senior high schools

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Abstract

The study investigated teachers' levels of competency in paper pattern-drafting in 30 Senior High Schools (SHS) in Ghana. The objectives were to find out the competency levels of the teachers in content knowledge and skills in pattern-drafting; and their challenges in pattern-drafting. Thirty Clothing and Textiles teachers in 30 SHSs were purposively sampled to participate in this study. Data were collected with a questionnaire and observation checklist, analysed to generate frequencies, percentages and means, and presented in tables. Competency level of the teachers in pattern-drafting content knowledge was high ($M = 3.50$) while that of content skill was low ($M = 2.43$). The main challenges of the teachers in pattern-drafting were fit problems with drafted patterns; inadequate tools; insufficient time for pattern-drafting lessons; and students' fear of pattern-drafting due to calculations involved. The researchers therefore recommended that the government should provide enough basic pattern-drafting tools and materials in the schools, timetable slots should be increased by one period in the second term of the second year, and the Ghana Education Service and Ghana Home Economics Association should organise in-service training workshops to help teachers refresh their content knowledge and skills in pattern-drafting.

KEYWORDS: CLOTHING AND TEXTILES, COMPETENCY, KNOWLEDGE, SKILL, TEACHER, PATTERN-DRAFTING, CHALLENGES

Introduction

The clothing industry is one sector of the economy which provides different categories of jobs for many people. From fibre to fabric manufacture, garment production, distribution, use and care, people need to be employed to offer specific services. For the production of quality goods, however, workers have to be trained well for the necessary knowledge and skills. The development of human resource for the clothing industry may be formal in school, or through apprenticeship training under the tutelage of a master/mistress. In Ghana, formal education in clothing production is provided at the basic, secondary and tertiary levels in school as part of the Vocational/Technical program (Boateng, 2012). Many people also learn clothing production skills from tailors and dressmakers through apprenticeship training (Fianu & Acquah-Harrison, 1999).

Though there are different methods of making patterns, paper pattern-drafting is one of the two methods emphasised in the school syllabus for Senior High Schools (SHS) in Ghana (GES, 2010). Since

Forster, P., Quarcoo, R., & Akomaning, E. L. (2018). Teacher competency in pattern-drafting lessons in senior high schools. *International Journal of Home Economics*, 11(1), 9-17.

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fabrics are expensive, students are taught how to make patterns for the designs of a garment and use the pattern to cut pieces from the fabric instead of cutting directly from the fabric (Adamtey, 2008).

Pattern-drafting in clothing production involves the changing of a two-dimensional piece of paper or fabric into a form that will fit a three-dimensional figure. It is one of the earliest steps in the development of a garment (Camp, 2011). According to Gavor (2011), pattern-making in clothing construction is a process using paper pattern pieces of the various parts of an article in garment production.

Patterns are usually made from paper but may also be made from sturdier materials like cardboard if they need to be more robust in order to withstand repeated use (Whitt, 2010). Gavor (2011) stated that in the drafting method, patterns are made directly from measurements taken from a pre-existing garment, an individual or a body form and using the collected measurements, the pattern of a desired design is drawn directly onto paper. Drafted patterns are drawn with architectural precision, and involve the use of mathematics, angles, curves, and straight lines to make basic patterns (known as a block), which are adapted into desired garment styles (Gavor, 2011).

The block consists of five parts: front and back bodice blocks, front and back skirt blocks, sleeve blocks, front and back trousers/pants blocks and front and back shirt blocks (Forster, 2014). According to Heischberg (2010), a library of slopers (bodice, pants, etc.) will help a designer create any number of patterns.

For effectiveness of any lesson delivery, teacher competency is key. *Competency*, according to the Online Etymology Dictionary (n.d.), means “sufficiency of qualification” as recorded from 1797. Competencies are thus the characteristics of a person that are related to superior performance in a job (Delamare Le Deist & Winterton, 2005). Competency is concerned with meaningful objectives and content of learning that engenders “the personal development of students and position[s] them within the domain of knowledge that can best prepare them to function effectively in society” (Mulder, Weigel, & Collins, 2007, p. 4). As indicated by Mulder et al. (2007) current literature supports “the contention that higher education needs to improve their connection with the needs of employers” and re-examine their program goals and their graduate skill sets to meet requests from the business world. It is clear from the high number of graduate unemployment in Ghana “that a deficit exists in the extent to which higher education can track the development of career-appropriate competencies” (Gosselin, Cooper, Bonnstetter & Bonnstetter, 2013). As pointed out by Gosselin et al. (2013), our future depends on students who possess a set of job-related professional competencies including lifelong learning, problem-solving, personal effectiveness and many others. One of the few studies to address the topic of measurement of Student Learning Outcomes (SLOs) in the US at multiple institutions, claimed that college students were demonstrating little growth in knowledge and skills (Arum & Roksa, 2011).

Pattern-drafting and adaptation requires the use of specific tools for pattern-drafting including: tape measure; seam ripper; fine-point Sharpie marker; tracing wheel; rotary cutter; paper-cutting scissors; tracing paper; cello tape; scotch tape; clear rulers; 12-inch clear plastic rule; metre rule; right-angle ruler; curved rulers; French curve; flexible curve; fashion scale; dressmakers’ square; pencil; erasers; compass; thumb-tacks or office pins; T/L-square; pattern weights; pattern hooks; brown paper; and a flat and wide table (Gavor, 2011; Heischberg, 2010). In addition to some of the above, the SHS Clothing and Textiles syllabus prescribes a clothing laboratory with store, and a large working table for each one to two students. What the SHS syllabus prescribes fall short of what the two researchers indicated but are good enough for the teaching of basic skills in pattern-drafting. Arnold (1985) and Taylor (2016) have observed that sophisticated software is now available for pattern-making.

Zacharia (2003) stressed that being able to offer a wide range of practical lessons in practical-oriented courses as in the case of Vocational and Technical subjects, which include Clothing and Textiles, make a huge difference in student attitude towards the subject, but few schools seem to be able to offer practical lessons, hence making lessons boring and uninspiring to students. Freedman (1997) added that if students have regular laboratory instruction, they develop a better attitude towards a subject. According to Toplis (2012), students are motivated if they do practical work as it enhances a better understanding of theory. Practical lessons can, however, be organised only when

the right tools are available and adequate to offer learners the experiences they require to enable them to develop skills in the subject.

According to Jauch and Traub-Merz (2006), garment production training programs of late are being given attention by the Ministry of Education in Ghana, for learners to have employable skills. These authors added that learners are able to develop competencies not only in pattern-drafting, but also in designing, garment-cutting, assembling and finishing of garments in school. Forster and Adamtey (2009) indicated that students in the University of Education, Winneba for instance, are trained in pattern-drafting to acquire skills to be able to teach at all levels of education in Ghana (basic, secondary, and tertiary). Forster and Ampong (2012) were also of the view that though freehand cutting of garments is popular in Ghana, learning how to develop paper patterns is necessary especially for mass production of garments in the industry. Similarly, one of the aims of the Ghana Education Service [GES] (2010) is to equip students with job skills for clothing production. Pattern-drafting is, therefore, taught in Clothing and Textiles at secondary and tertiary levels of education in Ghana to provide learners with paper pattern skills for garment production.

Teachers, to a large extent, influence what happens in lessons and determine the content and teaching/learning processes (Haladyna, Shaughnessy, & Redsun, 1982; Moroz, 1997). Foskett, Dyke, and Maringe (2004) also stated that young people (students) choose a subject based on the influence of teachers, their interests, careers it offers, and their belief that it will be useful in their future career, among others. Moroz (1997) also held the view that negative attitudes about an area of a study could stem from the way lessons are delivered and how uninteresting and irrelevant topics can be. The garment industry cannot survive without pattern-drafting skills, especially in developing countries where the use of computer applications such as Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM) are not common. Designing garments and developing suitable patterns for their production encourages one's creative abilities for public appreciation and increase in patronage of products.

Joseph Rowntree Foundation (2010) argued that children from lower socio-economic backgrounds may be disadvantaged in terms of educational outcomes, when taught in schools with fewer resources. It is again indicated that the negative attitudes of some school leadership towards applied subjects may impact learning outcomes. Foskett et al. (2004) held the view that in vocational education, learners are encouraged and influenced to demonstrate a positive approach and acknowledge the importance of skills and the world of work through their studies. They added, however, that not all schools show commitment to promoting positive attitudes towards learning of vocational skills. Toplis (2012) stated that secondary school students' attitudes towards practical work are generally positive, but their aspirations, attitudes and learning behaviour are affected by lack of resources.

Like other vocational/technical courses, the teaching of Clothing and Textile has never been without problems. According to Olaitan (1986), vocational subjects have been associated with the lower socio-economic backgrounds, and people who have physical or intellectual disabilities. To Molokwu (2010), people are of the view that Home Economics is meant for less academically inclined and many students shy away from it because of the high cost involved in the practical work. Olugbamigbe (2009) observed that lack of tools and materials make teaching and learning of the subject very challenging. According to Nguku (2012), a challenge faced in the teaching and learning of Home Economics was that students were not competent in the practical aspects, probably as a result of inadequate training due to lack of appropriate equipment, infrastructure, or well-trained staff. Allocation of time for practical work to ensure that techniques needed to acquire skills are well-taught is also inadequate (Finch & Crunkilton, 1999). As stated by Boateng (2012), more time is required for Vocational and Technical lessons in schools.

Paper pattern-drafting and adaptation is in the SHS Clothing and Textile syllabus and students are expected to be trained to acquire skills in it and use the patterns to produce garments in school as coursework (MOE, 2010). When Home Economics teachers meet during workshops and conferences, pattern-drafting always comes up as the most challenging topic for many teachers. The 2008 Educational Reform of Ghana (GES, 2010) requires that students should have acquired occupational skills by the end of the SHS program to enable them to apply their knowledge and skills in the industry. Fashion designers are at an advantage if they can make their own patterns and many students who opt for Clothing and Textiles at SHS have indicated they wanted to be fashion designers and set up their own garment industries after school (Forster, Quarcoo, Ashong, & Ghanney, 2016). It will be a

disadvantage for them to leave school without acquiring pattern-drafting skills. Some researchers have stated that many students who wish to take up clothing production as their career go into apprenticeship training to develop their garment-cutting skills better before establishing on their own (Forster & Ampong, 2012; Forster et al., 2016; Wovenu & Forster, 2009). The objectives of the study were to: find out Clothing and Textiles teachers competency levels in pattern-drafting knowledge and skills; and the challenges teachers face in the delivery of pattern-drafting and adaptation lessons.

Methods

The purpose of this study was to explore teachers' ability to teach pattern-drafting lessons effectively in selected SHSs in Ghana. Three regions were conveniently sampled out of the ten regions of Ghana to participate in the study. In each of the regions, ten SHSs which offered Clothing and Textiles were randomly selected to participate in the study. The Clothing and Textiles teacher in each of the selected schools was automatically selected to participate in the study. Thirty teachers of Clothing and Textiles, all of whom had a minimum an undergraduate degree in Home Economics or Fashion Technology Education were, therefore, purposively sampled from the 30 SHSs.

Data were collected from the respondents with a questionnaire and observation checklist. The teachers were asked to rate their levels of competency in content knowledge and skills in Likert scale questions which ranged positively from *Very High* (4), *High* (3), *Low* (2) and *Very Low* (1), while open-ended questions were used to collect data on the challenges they were facing in their pattern-drafting lessons. The researchers also observed drafted patterns made by students and the constructed garments, to determine alignment with the teachers' answers to questions on effectiveness of their pattern-drafting lesson deliveries. Data gathered for the study was analysed manually to generate frequencies, percentages, means and quotes and presented in tables where appropriate.

Findings and discussion

Teacher competency levels in pattern-drafting content knowledge and skills

For teachers to be able to deliver pattern-drafting lessons effectively, they have to be competent in both theory and practical skills. Teacher competency levels in content knowledge and skills in pattern-drafting in the selected SHSs are presented in Table 1.

Table 1 Teacher competency in paper pattern-drafting knowledge and skills

Variable	VH 4		H 3		L2		VL1		Total		Weighted
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	M
Content Knowledge	19(76)	63.3	7(21)	23.3	4(8)	13.3	0(0)	0	30(105)	100	3.50(H)
Content Skills	6(24)	20	7(21)	23.3	11(22)	37	6(6)	20	30(73)	100	2.43(L)

Weighted frequency scores in parentheses

The results of the study generally show that the teachers indicated a high level of competency ($M = 3.50$) in knowledge of pattern-drafting, however, the results indicate low skills ($M = 2.43$) in pattern-drafting. Table 1 indicates that majority of the teachers (97.3%) reported that their level of competency in content knowledge was high. It is worrying that the teachers' level of competency in pattern-drafting skills was generally low, this may explain why some Clothing and Textiles students go into apprenticeship training in garment-making skills after formal education before they can start their own small-scale garment production (Wovenu & Forster, 2009).

Boateng (2012) indicated that Vocational Technical Education (VTE) requires skilled and proficient teachers and there is the need for constant in-service training for teachers to upgrade their skills. One of the challenges listed by Nguku (2012) in the teaching and learning of Home Economics is the issue of availability of well-trained teachers for the job.

For effectiveness of any lesson delivery, teacher competency is key. Competencies mean sufficiency of qualification (Online Etymology Dictionary, n.d.) and are the characteristics of a person that are related to superior performance in a job (Delamare Le Deist & Winterton, 2005). Teachers cannot teach pattern-drafting skills effectively if their competency levels are not high.

Clothing and Textiles students may, therefore, not acquire the occupational skills in pattern-drafting for employment by the end of the program as expected in the 2008 Educational Reform of Ghana (GES, 2010) Since many students who opt for Clothing and Textiles at SHS indicated they wanted to set up their own garment industries after school (Forster, Quarcoo, Ashong, & Ghanney, 2016), teachers have to ensure that the right pattern-drafting skills are taught well in SHS because it will be a disadvantage for students to leave school without the required skills. Research in the United States of America also found that college students were demonstrating little growth in knowledge and skills (Arum & Roksa, 2011). It is possible that teacher education institutions who train Clothing and Textiles teachers are not addressing the pattern-drafting skills needs of trainee teachers adequately.

A teacher may be highly competent in both content knowledge and skills but cannot teach pattern-drafting lessons competently due to some other challenges.

Challenges of teachers in pattern-drafting lessons in SHS

Teaching and learning resources for paper pattern-drafting

Apart from the level of competency in practical subjects, teachers need the right tools to be effective in their lesson deliveries. Consequently, the teachers were asked to provide information on available teaching and learning materials and their adequacy in their schools.

Table 2 presents facilities available in the schools for pattern-drafting practical lessons. None of the 30 schools had *all* of the listed items. The only tools/materials available in all the schools were tape measures, paper-cutting scissors and brown paper. Some teachers explained that students, not the government or the schools, provided such items, unlike Science or ICT lessons. Clothing and Textiles teachers cannot also teach pattern-drafting lessons well for students to acquire the necessary skills if they do not have the right facilities. Gavor (2011) and Heischberg (2010) emphasised that facilities, tools and materials are essential in pattern-drafting and both teachers and students should have them to ensure competency. Each of the tools has a specific use in pattern-drafting. For instance, Arnold (1985) explained that the large tables allow papers to be spread during the drafting process and Forster (2014) stated that a good tape measure should be used to take body measurements and transfer the measurements on the pattern paper. As Arnold (1985) stated, the right facilities, tools and materials serve as an aid to a given task in pattern-drafting. Nguku (2012) advised that for proper acquisition of skills in Home Economics, therefore, there should be the right tools and material for teaching and demonstration. Each teacher claimed they had their own tools for demonstration but each student should also have the opportunity to learn how to use the tools through practice. This cannot happen if tools are not available or are inadequate in the schools. The teachers explained that students are supposed to provide their own brown paper, pins, tape measures and paper-cutting scissors, but not all students are able to provide them.

The list of equipment for pattern-drafting provided by teachers of what they have in their schools falls short of many items on lists provided by Gavor (2011) and Heischberg (2010). The researchers observed that even the few basic tools listed in the school syllabus were either not available or were available but inadequate to provide all students with the opportunity to learn how to use them. Olugbamigbe (2009) also identified inadequate tools and equipment for Clothing and Textiles as a challenge in a study. Though education is responsible for training students to acquire the necessary skills, knowledge and competencies to enter the clothing industry (Reda, 2015), the Clothing and Textiles teacher cannot deliver that service effectively where basic facilities for practical lessons are either not available or are inadequate, whether they are competent or not.

As stated in MOE (2010), all Vocational and Technical programs, which include Clothing and Textiles, need resources for proper implementation of programs; otherwise, they will be taught theoretically and students will not benefit from the programs for the objectives to be achieved. It is therefore suggested that all schools should have a stock of minimum equipment to be able to implement the syllabus and students should also be encouraged to own some small tools to help them. According to the teachers in this study, the government and students do not provide the necessary teaching tools and materials for paper pattern-drafting lessons in the schools.

Table 2 Availability and adequacy of teaching and learning facilities

Item	Available		Adequate Quantity	
	Freq.	%	Freq.	%
Paper-cutting scissors	30	100	28	93.3
Tape measure	30	100	23	92
Brown paper	30	100	24	80
Practical room	25	83	25	83
Large tables	21	70	19	63.3
Dressmakers' pins	21	70	21	100
Metre rule/yard stick	16	53	5	31.3
Straw Board	12	46.9	7	58.3
French curves	12	46.9	6	50
L-square	12	46.9	6	50
Thumb/drawing pins	12	40	12	100
Dressmakers' carbon	8	26.7	2	25
Pivot pins	6	20	2	33.3
Cello tape	5	16.7	5	100

Joseph Rowntree Foundation (2010) argued that most students who endure the harsh learning conditions usually attain poor educational results. If the schools are well-resourced with the necessary tools and materials for pattern-drafting, learning conditions may improve motivation of teachers and students and facilitate drafting skill acquisition among students. The level of support for practical work is very worrisome and a cause for concern since it affects the teaching and learning and undermines practical subjects.

Transition of students in Clothing and Textiles

According to Olaitan (1986), vocational subjects have been associated with lower socio-economic status students, and people who have physical or intellectual disabilities. Molokwu (2010) added that people are of the view that Home Economics is meant for students who may be less academically inclined, hence, many students have negative attitude towards Clothing and Textiles. However, in this study, many of the teachers indicated that students wanted to learn how to make patterns for their self-garments and were therefore eager to draft patterns. This is shown in the results where all the teachers surveyed said their students showed positive attitudes towards Clothing and Textiles, and pattern-drafting specifically. Toplis (2012) also indicated that secondary school students' attitudes towards practical work are generally positive. Forty percent of teachers in this study mentioned that some students did not choose this subject voluntarily so did not show interest initially, but were more engaged and active in class towards the end of the first year when they started experiencing the benefits of the subject. Perhaps some students avoid it at the stage of subject selection but develop positive attitudes towards it when they start learning it and begin to realize it is not what some people think it is. Foskett et al. (2004) stated that students' choice of a subject could stem from their interest in the subject, and their belief that it will be useful in their future career. Students who are interested in a subject will be very much disappointed if their teachers are not able to meet their skill expectations.

Time allocation for pattern-drafting

Another challenge stated by teachers was limited time allocation for pattern-drafting. A little more than half the teachers (53.3%) complained that the time was too short for practical lessons because pattern-drafting is time-consuming. Time allocation for Clothing and Textiles on school timetables is six periods of 40 minutes each in a week, as per the SHS syllabus. If teachers are finding it difficult to organise successful lessons to provide students with the relevant skills within that time, then it may be necessary to adjust the timetable slot on the syllabus.

Fit of drafted patterns

All teachers surveyed further indicated that some students had difficulty with the taking of body measurements accurately, and found it difficult to divide, add or subtract accurately as they transferred measurements to create the patterns on paper; students also had a fear of pattern-drafting lessons (20%), while many were not able to draft basic block patterns to fit with instructions provided in the textbooks (70%). The fit of patterns cannot be good if body measurements are not well-taken. This study confirms Nguku's (2012) assertion that students were not competent in practical work. Some teachers (36.6%) commented that "[t]he fundamentals are not well grasped by the students in Junior High School, making pattern-drafting challenging to the students in SHS".

As to whether they were able to teach pattern-drafting successfully in their schools, all the teachers expressed some level of success and provided evidence of drafted patterns made in class and articles cut with patterns shown in Table 3.

Table 3 Articles cut with drafted patterns made by students of the teachers

Article	Frequency	Percentage
Blouse	29	96.67
Baby's dress	28	93.33
Shirt	2	6.67
Skirt	2	6.67

It is stated in the 2010 syllabus (GES, 2010) that students should design different garments and use their block patterns to develop them for blouse, shirt, skirt, straight dress and sew self-garments as a course project. All these require the making of patterns and it is only teachers with high levels of competency in pattern-drafting who can help the students to acquire those skills. In this study, the researchers observed that many basic block patterns of the students were not of a high standard. They did not have well-defined curves at armholes, necklines and hemlines; front and back necklines had the same depths; across back, across chest and bust were extremely wide; waistlines (dress and skirt) were undefined; and darts were disproportionately distributed in shaping curved areas. Teachers complained that their students were usually not able to complete the practical lessons in class and so completed them as homework without their supervision, due to the limited time. It is apparent that learner competency in pattern-drafting skill acquisition was generally low.

It is stated in the GES (2010) syllabus that practical course project work should be assessed to form part of the school-based assessment in West Africa Senior Secondary Certificate Examination (WASSCE). Hence, students who are not able to acquire the drafting skills well enough to enable them to make good patterns for their projects, are likely to score low grades in Clothing and Textiles. In addition, they may have to go into apprenticeship training after school if they want to take up garment-making careers later in life.

Conclusions

Teachers' competency levels were high in pattern-drafting content knowledge but low in the content skills. Since the skills are necessary to enable learners to work in the garment industry, it is necessary for teachers to have high levels of competency in pattern-drafting skills. The main challenges of the teachers in pattern-drafting were lack of basic facilities; insufficient time for pattern-drafting lessons; and students' fear of pattern-drafting.

Biographies

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INTERNATIONAL FEDERATION
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REFEREED PAPER

US FCS professionals' perceptions of the current and future direction of Family and Consumer Sciences as a discipline

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Abstract

The purpose of the study was to understand how US Family and Consumer Sciences (FCS)-affiliated faculty and administrators (N = 140) perceived the current state and future direction of FCS as a discipline. Responses were coded on a positive/negative valence and were thematically analysed. Administrators were somewhat more optimistic about the future than were non-administrator faculty. Comments for the complete sample leaned negatively regarding the current state and the future of FCS. The most common concerns related to a fracturing identity and perceived relevance. The most common reason for optimism was the importance of the inherent interdisciplinary approach to address societal problems. Participants often recommended that FCS should reframe its identity and communicate its strengths with effective marketing.

KEYWORDS: PERCEPTION, FAMILY AND CONSUMER SCIENCES (FCS), FUTURE, HOME ECONOMICS, IDENTITY, RELEVANCE

Introduction and purpose

For over 100 years, the Family and Consumer Sciences (FCS) discipline has had an extensive history of helping families, individuals and communities. The name of this emerging discipline in the early 1900s was Home Economics and through the 20th century, the name in the US evolved to Family and Consumer Sciences as a more descriptive term for the profession. However, internationally, the field is still identified as Home Economics (Nickols & Collier, 2015). The discipline consistently strives to help societies develop healthy, productive and responsible citizens (Piscopo & Mugliett, 2012). Out of concern of the vast economic, cultural and societal changes at the turn of the 20th century, the inception of FCS as an interdisciplinary field brought together knowledge from the sciences, the arts and the humanities, focusing on families as well as the larger environment of individuals and communities (Vincenti, 1990). The International Federation for Home Economics' (IFHE) 21st century position statement characterised the current discipline as:

A field of study and a profession, situated in the human sciences that draws from a range of disciplines to achieve optimal and sustainable living for individuals, families and communities ... [professionals] are concerned with the empowerment and well-being of

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individuals, families and communities, and of facilitating the development of attributes for lifelong learning for paid, unpaid and voluntary work and living situations ... [they] are advocates for individuals, families and communities (IFHE Position Statement, 2008).

The image and perception of FCS has been discussed over many years. For example, in the 1980s, Harper and Davis (1986) and McFadden (1987) described the discipline as being at a crossroads for growth and development, but with confusion over the current and future direction of the profession. A decade later, Moe, Mullis, Dosser and Mullis (1991) stated that the profession appeared to be struggling despite name changes for existing programs as well as efforts to elevate accreditation with persistent attention to improving its image. More recently, Pendergast (2006) suggested the field was at a “convergent moment” where social factors were aligning, providing an opportunity to re-vision the profession and the discipline. Today, there continues to be extensive discussion over the current and future direction of the profession.

The purpose of this study was to understand how US FCS-affiliated faculty and administrators perceived the current state and future direction of FCS as a discipline. This study was focused on the US since it was part of an investigation that focused on the perceived value of the American Association of Family and Consumer Sciences (AAFCS) accreditation, qualitative questions on the present and future direction of FCS as a discipline were included. Specifically, how positive or negative were overall perceptions of the current and future states of FCS? How did perceptions vary by background and circumstance across various FCS professionals? What were common positive and negative perceptions related to FCS? A systematic effort to study FCS professionals’ concerns, as well as their positive perceptions and recommendations, can help inform efforts that seek to enhance FCS as a field and assist in its adaptability in the future.

Literature review

Historically, the FCS profession consisted of subject areas impacting the home, household and families and reflected the basic needs of all individuals for food, clothing, shelter, and well-being (physical, social and emotional) (Quilling, 1991; Jarva, 2012; Nickols & Collier, 2015). During the late 19th and early 20th centuries, the lack of safety, low standards of cleanliness and environmental hazards were seen as threats to the health of families living within the home. The founders of the discipline identified the need for social reform, activism and education indicating that “a better world and the path to that goal was the application of scientific knowledge to the family and the community” (Apple & Coleman, 2003, p. 106). Although the initial objective was to prepare women for the paid labour force, they “consciously and consistently sought to infuse an ethos of social reform ... whether those women were planning for a career outside the home or for homemaking” (Apple & Coleman, 2003, p.105). The belief was that not only was it critical for women in the labour force to be educated in Home Economics (later known as FCS in the US), but those unpaid and/or volunteers needed training as well. Therefore, it was necessary to bring together women, science, education and activism in the discipline to ensure social reform and improvement of society. However, as decades passed, and specialisations within the profession grew, the message of social reform seemed to become lost (Apple, 2015; Apple & Coleman, 2003; Hjalmeskog, 2012).

The perception of the discipline, especially from the public perspective, has been discussed over time. Nickols and Kay (2015) suggested that the field has been caught in a triple bind of a) the extremely complex focus of societal matters of daily living meeting basic human needs, b) populated largely by women and “work done by women has been devalued throughout history” (p. 2), and c) rapid expansion of specialisations within its scope. Breen and Driscoll (1989) stated that when FCS as a discipline was organised, the education of women for a ‘domestic role’ was unquestioned. However, due to rapid societal changes and the relatively brief nature of the discipline at the time, confusion developed over the current and future status of the discipline and the profession. Their research examined Home Economics programs to determine college and university administrators’ views of FCS. Breen and Driscoll found that administrators clearly defined their understanding of the mission of FCS programs, and, although it was felt that FCS units were maintaining updated curricula, and the quality of students and image of the program at institutions were positive, the quality of research and success in securing outside funding needed improvement. This finding was similar to other contemporary studies where practitioners indicated that improvement of research was vital for the discipline (e.g., Greninger, Durrett, Hampton, & Kitt, 1984).

The importance of FCS programs' mission in relation to an institution's mission has been cited as a significant determinant in the perception of the discipline. For example, Cory (1984) indicated that declining enrolments and a mission that was not central to the institution was cited in institutions where all or part of FCS units had been discontinued. When asked about their view of the public image of FCS, administrators agreed that the general public's image of the profession centred on women who cooked and sewed, and were mostly neutral as to whether the image would be enhanced by changing the name of the profession (Breen & Driscoll, 1989).

Apple and Coleman (2003), in their analysis of FCS and social reform through the early 20th century, observed that a change in direction of the discipline occurred in the 1930s from an emphasis on social reform to an emphasis on training young people for setting up a home, establishing a family, and managing household finances. Benn (2012) described the aim of the discipline was learning how to handle resources of the home and household in the most prudent way. At that point, there was a call for modernising the profession in response to increased industrialisation and the need to adapt to new technology. The effect of this change in direction narrowed the scope of the field and increased professional specialisations. Thus, through much of the 20th century, the social reform drive in FCS was restrained as students were instead prepared for roles in the labour force and in the home.

FCS's curriculum transformation in the US mirrored changes occurring in higher education in general during the early 20th century where specialisation and departmentalisation were prevalent (Quilling, 1991; Vincenti, 1990). Vincenti suggested that in education, preparation to do a particular kind of work became more important than developing the person. As specialisations grew, they became discrete and self-contained resulting in a reduction in the communication between the groups (Quilling, 1991; Heinila, 2012). Vincenti (1990) also suggested that not only has FCS struggled for legitimacy, the trend has been for specialisations within the discipline to "look outward toward their related disciplines rather than to focus on their original reasons for being created" (p. 184). Similarly, Quilling suggested that this process created concern for developing an integrated perspective. She indicated the process, in part, was a product of accumulated scientific knowledge that "remains in discrete categories until usable frameworks are provided that help to point out the unifying themes among speciality areas ... [FCS] is at such a juncture in its development" (Quilling, 1991, p. 253).

Apple and Coleman (2003) highlighted the challenges to the FCS discipline due to the process of continued specialisations. They indicated that graduates of post-secondary programs generally do not view themselves as FCS professionals; instead, they identify with a specialisation. This specialised identity has weakened the cohesiveness of the discipline as a whole. The home economics founders' original ideal of inspiring social responsibility in students was no longer emphasised.

Vinenti (1990), in her discussion of the interdisciplinary context of the field, indicated that overspecialisation weakens the ability to solve complex societal problems that require integration of many specialised fields. She argued that without this integration, home economics professionals may be less effective in the goal of improving the lives of the individual and of families, and that the pendulum needs to swing back to interdisciplinary, integrative collaboration among specialisations to solve today's societal problems. Kolodinsky (2012) described the root of the discipline as multifaceted generalists "who have the well-being of the household as our goal" (p. 160). Lorek and Wahlen (2012) echoed this while adding that issues today such as sustainable consumption can be addressed from the integration of those with various expertise from the specialisations within the discipline.

Benn (2012) described FCS as being "culturally dependent, society determined, [and] individually featured" (p. 59) indicating that the perception of the discipline may be seen in cultural context of the time. Moe et al. (1991) acknowledged concern about the identity and status of home economics (now called FCS), suggesting that even though there had been attempts to improve the image, part of the ongoing struggle could be attributed to the long-held perception of the field as being feminine. "Much of society accepts this narrow conception even though the field has continued to become more specialized and diversified" (p. 7). Benn (2012) stated that the "gender part is based on the context of home, kitchen and household ... context is culturally bound" (p. 53). In addition, Deagon (2012) examined how FCS was portrayed in news and media reports. Her findings suggested that the role of journalism in spreading information about the discipline has not provided change to public perceptions. She suggested that FCS should be presented as a branded and marketable package that "brings together our unique perspective of the family, our specialized and consolidated knowledge" (p. 86).

Harper and Davis (1986) indicated that implications for this type of a stereotype included the probability of lower status for the profession, professionals identifying more with their specialisation than with the discipline, and limited involvement of males in the profession. Moe et al. (1991) suggested that the stereotype has “centred on a lack of clarity and direction within the profession as to what [FCS professionals] do and the respect the public has for such activities” (p. 7). Views of the roles of women and femininity are products of societal perceptions of the time. Moe et al. (1991) suggested that as home economics leaders evaluated the profession’s future directions, two prevalent themes related to traditional feminine attitudes emerged. First, there was a “need to be more open to self-criticism and self-evaluation ... the field has been criticized for perpetuating old values and separating traditionally male and female spheres of activity” (p. 7). Second, an emphasis was needed for “a more holistic and integrative function in society ... [T]he field has been criticized for having an overly traditional approach ... that [is] no longer responsive to societal needs ... limiting diverse and necessary attributes and qualities for members” (p. 7). More recently, however, Piscopo and Mugliett (2012) suggested that current home economics “identify and respond to individual, family and community’s needs, offer targeted and practical education, counselling and guidance, and advocate for appropriate infrastructure, products and services” (p. 228). They indicated a need to market this work to enhance and legitimise the perception of FCS.

The purpose of this study was to understand how US FCS-affiliated faculty and administrators perceived the current state and future direction of FCS as a discipline. Specifically, how positive or negative were overall perceptions of the current and future states of FCS? How did perceptions vary by background and circumstance across various FCS professionals? What were common positive and negative perceptions related to FCS?

Method

As part of an investigation that focused on the perceived value of the American Association of Family and Consumer Sciences (AAFCS) accreditation (Hall, Harden & Pucciarelli, 2016; Pucciarelli, Hall & Harden, 2016) qualitative questions on the present and future direction of FCS as a discipline were included. A list of email addresses of US FCS/FCS-related post-secondary program faculty and administrators was developed from a database of contacts generated from a prior study (Pucciarelli & Faith, 2012) and a list of programs provided by AAFCS including the AAFCS Community of Colleges, Universities and Research (CUR), the Board on Human Sciences (BoHS), and the Council of Administrators of Family and Consumer Sciences (CAFCS) groups. An Internet-based search identified other FCS programs as well as programs in Human Sciences and other synonymous names that could be related to FCS programs not included in the other sources. A student was hired to gather the email addresses of faculty teaching in all the identified programs, as well as at least one administrator for each program. In addition, FCS/FCS-related program administrators were contacted to verify the information and to encourage participation.

A total of 1,910 faculty and administrators from FCS/FCS-related programs email addresses was gathered. Email invitations, including a brief introduction and link to a consent form, were sent through the *Qualtrics* online survey platform. Fifty-eight email invitations bounced back, leaving a total of 1,852 addresses. An incentive was offered to participants, who were entered into a lottery system to win one of 35 stipends worth \$35 each. Three hundred and seventeen (317) participants responded to the survey (a 17% response rate). Though it is not possible to know how many email invitations were viewed by targeted recipients (e.g., some may have been filtered out through automated servers), a relatively low response rate is unsurprising given our recruitment constraints and the nature of email-based recruitment (see limitations section for additional discussion). The survey included two open-ended questions that asked about perceptions of the current and future state of FCS as a discipline:

1. Describe your observations about the current state of Family and Consumer Sciences as a discipline.
2. Describe your beliefs about the future direction of Family and Consumer Sciences as a discipline.

Nearly half of these respondents (44%, $n = 140$) provided comments on at least one of the two questions, and these were the only participants included in this study.

Analyses

The data were analysed and coded in two different ways. First, a qualitative content analysis was conducted, using the complete response to each question as the unit of analysis (Robson, 1993), to rate the positive/negative nature of each comment holistically (perception valence). Second, a thematic analysis was conducted to capture common sentiments and meanings (Braun, & Clarke, 2006) that represented various perceptions about the current and future states of FCS.

Perception valence

Responses to the two open-ended survey questions were analysed for their overall positive/negative valence to help capture the extent to which respondents had optimistic or pessimistic perceptions of FCS. The complete response of each respondent to each of the two questions (separately), were coded on a 5-point scale (*overall negative, more negative than positive, neutral, more positive than negative* and *overall positive*). The researchers individually coded each answer and then discussed any differences. Complete consensus of the coding was reached among the researchers through discussion. The numeric values assigned to each statement were used for testing correlation between the two variables and for detecting possible statistical differences between various sample characteristics. Such analyses could help identify factors potentially related to positive or negative perceptions.

Thematic analysis

Responses were analysed and coded to identify themes related to optimistic and pessimistic perceptions of FCS. Working independently at first, the investigators used the constant comparative method (Strauss & Corbin, 1996) to identify initial, potential themes. Working together, the investigators identified an overarching pattern of organisation for categorizing themes:

- reasons for optimism and concern about the current state of FCS,
- reasons for optimism and concern about the future of FCS, and
- recommendations for making or keeping FCS relevant in the future.

From the agreed-upon patterns, the investigators identified themes across responses that represented distinct perceptions or sentiments. Discussion pursued until complete consensus was reached regarding these themes.

Sample characteristics

The sample consisted of generally female (81.6%), non-administrator faculty members (instructors) (79.3%), who worked in non-AAFCS-accredited programs (61.9%). Just over a third of the respondents were current members of AAFCS (35.8%), and an additional 13% were former members. Slightly more than half reported working in a high-research-productivity university (54.7%) and had worked in higher education for over 18 years on average ($M = 18.28$; $SD = 10.73$). Participants indicated their location by clicking on an interactive map that divided the country into six regions (see Figure 1). Although participants worked in all regions throughout the country, the largest concentrations were in the South (38%), Midwest (29.5%), and West (15.5%) of the US.



Figure 1 Interactive map for recording region where a respondent's institution was located

Source: <http://www.usbiathlon.org/foundation/regional-distribution-map.html>

Results and findings

The perception valences of the two open-ended question responses were significantly correlated, ($r = .48$, $p < .001$), indicating that while participants were significantly consistent with valence toward both the current state and future of FCS, they were far from being equally positive or negative about both.

Descriptive statistics revealed that approximately 72% of responses included some concern or anxiety about the current FCS state (overall negative, or more negative than positive), as did approximately 67% of responses regarding the future of FCS. T-tests indicated that the valence perceptions on the current state of FCS did not differ based on any background characteristics (gender, administrator status, location, type of institution, and AAFCS membership status), and was not correlated with years in higher education. However, for the future of FCS, administrators were generally more positive $t(70) = 3.39$, $p < .05$, which was the only background characteristic related to this perception.

Current state of FCS

As noted, approximately 72% of responses included some concern or anxiety about the current FCS profession (overall negative, or more negative than positive). A qualitative analysis of the responses to the open-ended question about the current state of FCS as a discipline were grouped under broad thematic headings. The most common concerns (themes) about FCS were related to (in order from more to less frequent) *fracturing*, *identity*, *relevance*, *respect* and *branding*. (see Table 1).

Table 1 Current FCS theme: concerns

QUOTE	ROLE
Fracturing	
This profession has been through an identity crisis, trying to change its image, and in my opinion, has fractured itself. Specialisation seems to be what is valued today, so programs are being absorbed into other colleges and schools	Instructor
Although many of the individual fields are strong, I think the very idea of FCS as a "discipline" has been dying for a long time. Today, it feels like a loose and archaic conglomeration of fields with disparate interests, methodologies, constituencies, and needs.	Instructor
Many programs in FCS have become so specialized that common values and direction are difficult to find	Instructor
I think that we have become more of a collection of specialists. If we don't build up the people being trained as generalists, I don't think that bodes well for the future of ... FCS as a discipline. Specialists will not see the value of interdisciplinary configurations... if there are no/few generalists left to hold programs together and help build cohesion.	Instructor

QUOTE	ROLE
FCS as a discipline is perceived as behind the times because it is focused on homemaking life skills that were needed 20+ years ago and are not valued today; however, those life skills are more necessary today than ever before since they truly do focus on improving the quality of life for everyone. Added to that, FCS has lost strength as a discipline because FCS is so broad and instructors tend to focus their efforts on their specific area and less on FCS in general. Therefore, FCS professionals are not a strong voice as a group—too fractured and self-focused	Instructor
Identity	
There appears to be an identity crisis and many graduates do not understand the historical contexts that has created the discipline.	Instructor
When recruiting, prospective students do not know what Family and Consumer Sciences means or what professions fall into that category. Other faculty members and departments at the University don't know what it means or even how to say it.	Instructor
It has an image problem. People still see us as Home Economics and that we 'stitch and stir'. Students fail to see the integrative nature of FCS and "cling" to their options/interests (e.g., Dietetics, Hospitality) over-identifying with FCS.	Instructor
Still not recognized for what all is taught and learned in this discipline. Old 'home economics' mindset has not changed along with the discipline.	Administrator
On many college and university campuses I think it is still perceived as a soft science. The general public does not recognize the professional direction that the majors within FCS have moved over the last 25+ years.	Instructor
It is continuing to evolve but struggles from the lack of well-defined identity.	Administrator
At a cross-road. Unclear about its purpose and objectives.	Administrator
FCS is unknown as a discipline—it is only recognized by those in the field. At a time when citizens are seeking the skills and outcomes that FCS provides, they do not know that FCS is relevant. Unfortunately, when the name of the field changed, it lost market share.	Instructor
It's a growing discipline that some students are hesitant to major in, because they are unaware of what they can do with a degree in FCS.	Instructor
In spite [of] the large problems associated with the name confusion, the discipline is strong at the post-secondary level. Graduates are getting very competitive jobs in a wide range of areas. General programs that focus on a broad range of topics are weaker than programs that specialize in preparing graduates for more narrow career paths.	Instructor
Relevance	
Unfortunately, I think it is a dying discipline yet all the different components individually are very important to current society.	Instructor
It appears to be on a declining trajectory.	Instructor
It needs to evolve. It is getting to be "old-fashioned" and without more clear career choices, it will fade away. They need to recognize the most profitable careers and gear the dept towards those.	Instructor
It seems to be becoming more obsolete	Instructor
I think it is a great discipline but its importance overall is greatly undervalued by most in the academic world. I also feel that many people believe it is old-fashioned and outdated.	Instructor
Respect	
Needs more research presence to be considered on equal footing with other disciplines.	Administrator
It is not understood and not respected.	Instructor
I think FCS has much to offer but is not perceived as scholarly. There also seems to be a lack of awareness of FCS (what it is, what you can do with the degree, etc.). I also think students (and parents) question job prospects in the field.	Instructor
In finding reviewers for promotion and tenure it is very difficult to find strong programs/faculty in the consumer side. Colleagues report this part of the discipline is weak in their minds as well.	Administrator
Needs more respect as a science and as valuable in society	Instructor
Branding	
We have not done an effective job of communications the meaning and value of FCS as a discipline. Until we can demonstrate a reason why our seemingly diverse programs belong together under the FCS a label, we will struggle with credibility.	Instructor
We need to promote what we do and our skills and why they are important.	Instructor
Could see it farmed out to other departments in some institutions. The general population doesn't recognize the benefit (sew and stir). We (as a whole) don't do a great job of self-promotion. I didn't recognize the value during undergrad or grad school. Not until seeing the educational gap when I began teaching did I then appreciate the breadth of knowledge within FCS and its role in education	Instructor

QUOTE	ROLE
FCS needs to work harder to maintain programs, especially to keep them in the high schools, so students will be able to experience FCS before getting to college. We have the content that will solve a lot of our nation's societal problems—we need to do better about promoting ourselves and our content	Administrator
I think it is largely misunderstood by many observers who relate to their experiences in secondary Home Economics programs. In view of the recurring calls to “bring back Home Ec,” I think we have a prime opportunity to demonstrate our relevance today with targeted education in life skills for all youth	Instructor
FCS is a viable discipline that has to be marketed correctly to stay visible in order to survive.	Instructor

The most common reasons for optimism of the current FCS profession were related to the importance of FCS for addressing societal problems (see Table 2). FCS professionals are experts and highly qualified to deal with the complexities of today's societal issues impacting individuals, families and communities.

Table 2 Current FCS theme: reasons for optimism

QUOTE	ROLE
Important content	
It is a viable profession that is so, so needed by individuals, families, and communities. Due in part to its decreased presence in secondary education over the last 39+ years, many of today's societal issues have sprung from lack of education on the topics that FCS provides—nutrition, financial management, parenting, child development, etc.	Instructor
While it is extremely important in regard to ongoing problems in the US, it is struggling to make society understand its relevance.	Administrator
FCS is still a very important discipline. FCS professionals are better prepared to handle the major issues facing society today (i.e., bullying, payday loans, college debt, food insecurity, food deserts, the changing family dynamics, obesity and other food-related health challenges, etc.)	Instructor

Future of FCS

Approximately 67% of responses included some concern or anxiety about the future of FCS (overall negative, or more negative than positive). The following six themes emerged from the thematic analysis (in order from more to less frequent):

- fading,
- need clear identity,
- fracturing,
- important content,
- requires effort to survive, and
- strong/strengthening (see Table 3).

Table 3 Future of FCS theme: concerns

QUOTE	ROLE
Fading	
I think it's going to fade away as soon as the older generation retires.	Instructor
Although I believe FCS is a valuable field with much to offer, the future outlook for FCS as a holistic discipline is bleak. Again, the trend is toward specialisation.	Instructor
I believe that this discipline is at risk of becoming extinct.	Instructor
Likely to be eliminated in most states or dramatically paired down.	Instructor
FCS will be gone in 20 years if radical changes are not made.	Instructor
In order to remain viable, I think the program is going to have become interwoven with other valued specialized trainings—I worry that as a standalone program, FCS is struggling to remain modern and relevant.	Instructor
As a profession, I think FCS is struggling to maintain membership and recognition. It is ironic when the family structure in our society is in such dire straits. I think programs in post-secondary education are impacted heavily by the strength (or lack of) programs on the secondary level. This link is critical.	Instructor

QUOTE	ROLE
Does not seem as important as more industry-connected fields.	Instructor
It failed to live up to its potential 15–20 years ago. The professional organisation seemed to be moribund and more concerned with internal politics than improvement and critical evaluation. Unless it can demonstrate a unique niche that has not been appropriated by newer and/or more vigorous disciplines, develop a central identity beyond Swallow's ideas, and demonstrate applicability to current issues and families, then it may be time to allow the departments and discipline to merge with others and become a historical note.	Instructor
I think we're at a critical point, and we can either decide to be relevant, and explain what we bring to the table that's unique—or we can just fade away. We have a bad habit of running away from critical and controversial issues affecting families. ...No amount of rebranding will save us if we can't articulate what we bring to the table that's still unique and relevant.	Instructor
Need clear identity	
In our department and institution, consumer sciences no longer feels like a good “fit” with the direction of the rest of the department.	Instructor
For FCS to survive, it must be more dynamic, more relevant, not only in what professors may or may not bring into it, but how it is advertised to outsiders.	Instructor
There needs to be a united front from all FCSers about the who and what we are. As FCS has evolved, viable programs take the resources, such as hospitality programs grow and FCS education dies. Other programs stagnate without sufficient resources. What we and what we teach are fundamentals to family life and to the welfare of communities; however, those values are deeply undervalued. Unless a program is very strong, FCS programs will continue to be eliminated or separated to various campus disciplines.	Instructor
Fracturing	
I have doubts about it surviving. The professional aspects have been siphoned off into nutrition, hospitality management, and interior design industries.	Instructor
I think FCS is going to eventually fade in favor of the specialty areas.	Instructor
It will eventually become just a small interest group. This hurts my heart, but I believe it is the way of the future.	Instructor
Specialization is tearing it apart. We need to go back to why this is called “family’ and show how all these specialized areas are needed for proper functioning of the family. The discipline is too disjointed. We are operating like a dysfunctional family	Instructor

The researchers defined the theme “fading” when participants’ comments were related to the perception of the discipline being outdated; the “need for clear identity” was defined by comments related to the lack of recognition and understanding of the profession; whereas, “fracturing” related to increased emphasis of the specialisations within FCS. These themes were similar to, and seemingly an extension of, thoughts expressed regarding the current FCS profession (see Table 2). Participants described the FCS as being at a critical juncture and voiced concern of survival of the profession unless action is taken to promote its relevance.

The most common reasons for optimism were related to the importance of FCS content for addressing societal problems (see Table 4). The ability to solve complex society program requires integrative collaboration from many specialisations. Participants seemed to feel that, due to its inherent interdisciplinary structure, FCS provides that environment, which is much needed in today’s society. Two participants stated: “I think as families exist today, we need it more than ever” and “FCS is a forever discipline as we will forever need to acquire the basic needs of life: food, water, shelter, and a sense of security and belonging.” Therefore, the future of the FCS profession “will continue to be seen as the go-to discipline for the comprehensive content areas it includes”.

Table 4 Future of FCS theme: reasons for optimism

QUOTE	ROLE
Important content	
I think as families exist today, we need it more than ever. However, that view is not reflected in how new professionals are being trained. Without their “buy-in”, I’m not sure that this approach can continue to exist.	Instructor
Scary, although the programs are vastly needed in middle and high schools as well as universities.	Instructor

The family is central to implementing any policy change, in individual and family functioning, and in the stability of our society so I sure like to think we'll all catch on to how vital these fields are to the world!	Instructor
Requires effort to survive	
I honestly don't think it will survive as a discipline another 10 years and I hate to admit that even to myself, but all indicators say it is ending and I intend to pursue empowering individuals, families and communities in all areas of my life even after I retire because it is what I believe and have passion for.	Instructor
I hope that the discipline can weather this storm. I think it makes a valuable contribution to the social sciences that is unique from psychology, sociology, and social work	Instructor
I see FCS as a discipline continuing, but I feel we have to be forever vigilant to outside groups that don't see our value as a unit and want to break up departments. I don't see industries focus on whether the student graduates from an FCS Program they just want students who can solve problems and communicate ideas. The FCS major who graduates from our program can certainly do these things.	Instructor
Strong/strengthening	
I think FCS should be integrated into others curriculums and tie to other social issues if it wants to survive. We need to advocate for interdisciplinary and transdisciplinary work.	Instructor
In my opinion, academic disciplines seem to go through a cycle of encouraging inclusive and interdisciplinary to individualistic and narrow-focused. ...It becomes harder to have a collective identity as FCS anymore, but I think the importance of the interdisciplinary knowledge will bounce back. No matter what, I think we just try to keep producing quality research, students, and outreach outcomes.	Instructor

Those who expressed hopefulness in the future of the FCS profession indicated that in order to continue, effort is needed to ensure the profession survives (see Table 4). For example, "I hope that the discipline can weather this storm. I think it makes a valuable contribution to the social sciences that is unique". "Frankly, it's getting old hearing the FCS is going away; it hasn't and it won't. There is a resurgence of interest in the discipline even though some have tried to trivialize it".

Throughout the comments offered, participants made recommendations for ensuring the viability of FCS, typically focused on reframing its identity and communicating FCS strengths (see Table 5). Comments included "we need to better market and brand ourselves ... to position ourselves as problem solvers ... to be more visible on the national front" and "Educating the general public, employers, families about what FCS is 'about' will be helpful in continuing to offer these programs".

Table 5 Future of FCS theme: Recommendations

QUOTE	ROLE
Educating the general public, employers, families about what FCS is "about" will be helpful in continuing to offer these programs. Many people within a college/university that offers FCS programs ... do not always understand what the discipline is about. When budgetary constraints come into play often the first thing that comes to mind is breaking FCS departments up and moving the majors to other programs.	Instructor
You need to hire a good marketing team to help elevate through social marketing.	Instructor
I am a big believer in the ideals of FCS as a collective of professionals seeking to advance the quality of individual and family life. Try to focus on increasing the relevance of AAFCS for folks who are researchers as well as teachers.	Instructor
Ongoing need for increased visibility and skillful telling of our success stories.	Instructor
We need to clearly demonstrate the FCS knowledge base. We need to position ourselves as problem solvers. We need to be more visible on the national front.	Administrator
We need to run, run, run, over to the engineering schools and ask to play with them. We were originally founded in the US at an engineering institution and engineering is beginning to be embarrassed by the lack of women in their programs. We need to share our activities with them, not with Biochemistry, Business or Architecture (areas we are currently being pushed towards) because they are also an applied science. ...If the whole future of modern society is looming across a digital singularity, we need to get our hands on what "quality of life" means in the coming world or risk being left behind.	Instructor

Discussion

Two main perspectives on the current and future state of FCS were evident among FCS-affiliated faculty and administrators in the US. There is a cohort who is positive about the current and future state of FCS, with the two viewpoints correlated ($r = 0.48, p < .01$), and another cohort that strongly

felt that FCS needs significant restructuring to maintain viability. From its inception, the FCS profession has emphasised its focus on social reform in order to empower individuals, families and communities in producing responsible and productive citizens in safe and healthy environments. As stated by Nickols and Kay (2015), “despite being misunderstood, trivialized, and underresourced, [the discipline] has been addressing the persistent problems of daily life for more than a century” (p. 3).

Respondents said that FCS needs to continue to contribute to solving societal issues today as it was when the profession was founded. FCS, as a discipline, needs to be an entity that will continue to respond to the basic human needs of life and aid in the development of a sense of security and belongingness of individuals, families and communities. In order to be effective in the process of solving complex societal issues, Vincenti (1990) argued that interdisciplinary, integrative collaboration among specialisations is required. Many participants felt that FCS has all of the components available if the pendulum would swing away from overspecialisation.

Similar to studies dating back over 30 years (Breen & Driscoll, 1989; Greninger et al., 1984), participants in this study felt that the discipline places a greater value on specialisations than the interdisciplinary whole. This stance has resulted in a loss of perceived strength for FCS as a discipline, and the trend is not anticipated to change in the future. This concern of emphasis on specialisation has been a reoccurring topic for many years. For example, Apple and Coleman (2003) identified a shift toward an increase in professional specialisation in the 1930s moving the emphasis from social reform to an emphasis on the sub-disciplinary areas as well as preparing individuals for careers and consumer roles in managing the home.

As further demonstration of the recurring topic on specialisation, in the 1980s, Harper and Davis (1986) and McFadden (1987) discussed confusion over the current and future direction of the profession. In the 1990s, Vincenti (1990) identified the tendency to look toward related specialisation disciplines rather than the original integrated focus. Quilling (1991) suggested that the process of specialisation created concern for failing to develop an integrated perspective. Continuing into the 21st century, Apple and Coleman (2003) indicated that graduates of post-secondary programs generally identify with the specialisation rather than viewing themselves as FCS professionals. This has weakened the cohesiveness of the discipline that is no longer emphasised to inspire social responsibility in students.

As the sub-disciplines have organised and/or strengthened individual organisations over the past 25 years, such as the Academy of Nutrition and Dietetics, and as those organisations' newer members self-affiliate with their discipline-specific groups, less interest is seen in joining a second cross-discipline organisation. Themes from the data support this assertion; “[FCS is] going to fade away as soon as the older generation retires” and “the areas seem to continue to differentiate”. Although this study did not measure motives to the perceptions, we hypothesise one reason for professionals in the discipline may be the costs involved in maintaining multiple professional organisation memberships. This is a question needing further exploration.

Similarly, participant concerns about FCS currently and in the future converge on marketing and relevance. Findings indicate that respondents think FCS has identity and branding issues. Respondents voiced similar thoughts to Piscopo and Mugliett (2012) that there is a great need to market FCS to legitimise the perception of the discipline, Breen and Driscoll (1989) found that the quality of research and success in securing outside funding needed improvement and Greninger et al. (1984) reported that improvement of research was vital for the discipline.

Along a similar vein of thought, some participants said that FCS has much to offer, but the data suggests it is not perceived or respected as a scholarly discipline. Several things are needed, including more research presence, increased visibility, advocating for the benefits of interdisciplinary and transdisciplinary work, and a more effective job of communicating the value and the meaning of what FCS offers. Additionally, it is paramount that the discipline and the profession educate the general public, employers, and prospective students as to what FCS offers. These types of problems may be addressed through marketing efforts and FCS can use these results to tease out how to improve the discipline's image.

The results of findings from this study seem to suggest that FCS professionals' perceptions of the discipline mirror concerns and express similar issues that were identified in the review of the

literature in the 1980s, 1990s and 2000s. Similar challenges remain related to relevance, identity and respect of the profession. Little improvement has been documented addressing these issues although researchers at various times expressed being at a crossroads where we had to reflect and revision the discipline for the future (e.g., McFadden, 1987; Pendergast, 2006).

Similar to Pendergast, McGregor and Turkki (2012), who stated that for the discipline “to be more visible and accessible, we have to be able to define and articulate distinctive characteristics” (p. 9), several participants described a need for attention on identity and rebranding. Furthermore, Pendergast (2012) suggested that what FCS has “failed to achieve is recognition for the role it plays intentionally to address the optimisation of well-being and the development of lifelong learning attributes as core to the discipline” (p. 16). In consideration of the discipline as a sustainable profession, she suggested the key messages for the future such as:

- rebranding of the name,
- end the fragmentation of the profession into various micro-fields, and
- development of an internationally united philosophy.

The data beginning in the 1980s’ studies inclusive to the current study creates a pattern of outcomes and themes that are consistent. The discipline has studied its strengths and areas needing improvement for close to thirty years with similar results. That perceptions remain the same, at least in the United States, while environmental context changes over the decades suggest that any interventions planned and executed to shift perception of the organisation have not been successful.

Two interconnected themes emerged from this study of US FCS-affiliated faculty and administrators:

- a) In order to maintain relevance, a change is needed in marketing and messaging to both external scholars and internal FCS members within the discipline. FCS’s greatest strength is its interdisciplinary structure; hence, marketing should focus on this theme.
- b) The research arm of FCS’s mission needs more emphasis, and members should be encouraged to conduct interdisciplinary and transdisciplinary studies, which would reinforce FCS’s strongest asset.

Findings from this study suggest that chronic and complex societal problems are best approached from networked disciplines like FCS, an idea that can feed the marketing campaign. For the last thirty years, researchers have concluded that maintaining the status quo means FCS will continue to fracture. This issue must be addressed.

Study limitations

Though we were able to assemble a large, regionally-diverse set of email addresses, the low response rate (17%) limits the extent to which all perspectives were captured. Using only modest incentives (based on budgetary constraints) and relying on emails sent to busy faculty likely contributed to a low response rate. US FCS/FCS-related program administrators were contacted to verify the program presence and to encourage participation prior to the email invitations being sent. However, it is unknown if the email invitations were viewed by the targeted recipients. Program administrators were notified that a survey was being sent, but it is not known if that information was communicated to faculty in the program.

It is possible that larger financial incentives, particularly the ability to compensate each participant, and contacting potential participants through multiple diverse methods (e.g., phone call, mailer, face-to-face contact at conferences), would likely improve responsiveness. Obtaining the resources necessary for such a thorough approach can be challenging, but could result in broader data with additional nuance. Is also possible that the main focus of the survey (perceptions of the value of AAFCS accreditation) narrowed the sample due to potentially less intrinsic interest in that particular focus than on the current and future state of FCS. Additionally, other methods of data collection such as focus groups and interviews could provide valuable information regarding their perception of the profession.

More research is needed to identify the motives behind the perceptions in the current research findings. The findings from this study imply that there may be a link between decreased membership in AAFCS (sample 35.8% current and 13% prior) and the cost of dual memberships (FCS and sub-discipline). Future studies may want to examine this relationship. To offset the heavy focus from the US regions of the South, Midwest and West, multiple focus groups representing all geographic regions could be conducted. Findings may account for varying regional cultures and determine motivating factors to both inclusion and exclusion to the FCS discipline by members and non-members.

This case study from the US provides a dataset from which other researchers can measure differences between global regions. Information gathered internationally to determine if the perceptions identified by professionals outside the US are shared by those expressed through this study. Are the US-centric perceptions similar to or different than other nation states? Measuring the differences and exploring the hows and whys of those differences may illuminate solutions to the US organisation.

Biographies

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Deanna Pucciarelli, PhD is an Associate Professor of Nutrition and Dietetics, Ball State University, Muncie, IN. Her research projects include investigating environmental determinants to human food consumption patterns. Some of the variables that impact food intake: cultural, familial, local and national food policies, psychological, socio-economical level have been the focus of her research program. Another area of investigative interest is institutional and pedagogical best practices. She co-facilitated Ball State University's New Faculty Academy 2015-2016.

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INTERNATIONAL FEDERATION
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REFEREED PAPER

Modelling Ghanaian students' entrepreneurship intentions: Home economics education intervention?

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Abstract

This paper examines the behavioural and demographic characteristics of students that influence their inclination to job creation intentions. Accordingly, two separate logistic regression models are obtained from data on 1414 students in seven universities in Ghana. Results showed that four factors influence students' job creation inclination. These factors, in decreasing order of importance, were entrepreneur intention factor, pro-activeness; risk-taking and competitive factor. There was a general inclination for work in the public sector among respondents irrespective of background. However, it was further found that the preferred sector of work was significantly determined based on age, type of institution attended and pro-activeness of the individual. Most of the respondents preferred to be employees than employers because to own a business requires one to have entrepreneurial, risk-taking and competitive inclinations. The paper concludes by suggesting the need to instil entrepreneurship mindset into students through Home Economics education, which may lead to economic independence and unemployment reduction.

KEYWORDS: ENTREPRENEURSHIP, GRADUATE UNEMPLOYMENT, JOB CREATION

Introduction

Graduate unemployment has been a major challenge for governments all over the world largely because of the increasing number of graduates from tertiary institutions relative to the number of jobs available at any given period. The increase in graduate unemployment is an indication that graduates lack the mindsets to engage themselves in entrepreneurship activities, (Aryeetey, 2011; Fosu & Boateng, 2013; Mensah, 2013; Owusu-Ansah & Poku, 2012).

Extant literature reveals university graduates in Ghana lack calculated risk-taking, pro-activeness, opportunity-seeking, creativity and innovative abilities. Consequently, more than 50% of them find it difficult getting employment years after graduation and have resorted to the formation of unemployed youth association (Afenyadu, King, McGrath, Rogerson, & Visser, 2001; Aryeetey, 2011; Fosu & Boateng, 2013; Owusu-Ansah & Poku, 2012). The lack of entrepreneurial abilities puts such graduates in a disadvantageous situation where they have become over-dependent on superior others and the state to create job opportunities for them, rather than creating job opportunities for themselves. This over-dependent mentality emanates from the fact that traditional educational systems fall short of addressing the political, social, and economic advancements of individuals. It rather over-emphasises theories with little attention paid to practical application, particularly in the African context, resulting in graduates' desire for white collar jobs. Also, the absence of mentoring

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for undergraduates who have the desire to become entrepreneurs worsens the situation (Gibb, 2002; Kuenyehia, 2012). Observation in local communities in Ghana reveals that most parents of graduates, (usually mothers) use their ingenuity, pro-active, innovative and risk-taking abilities to engage in petty trading and use the proceeds to cater for their families, including their children's education. These graduates continue to depend on such parents for sustenance while waiting for job opportunities, unlike their illiterate or semi-literate parents who did not have any formal entrepreneurship or home economics education. Of what use then is education if it does not equip individuals to become economically independent? If entrepreneurial mindset enables one to have more autonomy to make things happen (Gibb, 2002), then it is expedient for students in universities offering courses like Home Economics to engage in entrepreneurial activities during their course of study before graduation.

The unemployment situation in Ghana is critical in two dimensions: employers find it difficult to access the right calibre of graduates for employment, and graduates are also not finding employment (Afenyadu et al., 2001). Collaboration between tertiary institutions, local research institutions and industry towards the development of the right human capital appears non-existent leading to lack of adequate entrepreneurial and employable skills (Kudonoo, Buame, & Acheampong, 2012). This gap needs urgent attention since the issue of unemployment has the potential of affecting healthy family living and thereby destabilising social cohesion and national security.

Objectives of the study

The main purpose of this study, therefore, was to examine the behavioural characteristics of students that influence their perceived employment intentions. Specifically, the study aimed to:

1. Identify latent factors that describe behavioural characteristics of students regarding entrepreneurship.
2. Model student's preferred choice of sector of employment after graduation based on the latent factors and demographic characteristics.
3. Model student's preferred employment status after graduation based on the identified salient variables.
4. Suggest how the principles of Home Economics education can be used to minimise undergraduate unemployment.

Review of related literature

Entrepreneurship education

Entrepreneurship education is aimed at improving students' cognitive abilities toward opportunity recognition, instrumental skills for new venture creation, and cultural attitudes favourable to entrepreneurial behaviour (Amorós, Cristi, & Minniti, 2009). Cognitive ability in this perspective refers to an individual's ability to process information derived from markets and social interactions (Levie & Autio, 2008).

The definition that encapsulates this study's perspective of effective entrepreneurial education is that of The European Commission Report (2012). It defines entrepreneurship education as a process that "prepares people to be responsible enterprising individuals who have the knowledge, skills and attitudes necessary to achieve the goals they set for themselves to live fulfilled lives" (ECR, 2012, p. 44). This definition emphasises the need to transform individuals into action-oriented people who are pro-active, creative, innovative, and calculated risk-takers in their endeavours for progress and success in their lives. The report further explains that the focus of entrepreneurship education is to ensure that knowledge, skills and attitudes are key competencies students must acquire in their courses of study to enable them to become economically independent and contribute towards the socio-economic development of their nations. This study is consistent with the report's stance in that it encourages the creation of start-ups and the development of social skills and attitudes that enable individuals to generate ideas, act, and take responsibility for lifelong learning.

In considering entrepreneurship education in its entirety, Fayolle and Klandt (2006) proposed three main dimensions. The first is paying more attention to the development of the right values, beliefs

and attitudes that enable one to have an entrepreneurial identity. The second deals with social skills, including those that enable one to seize opportunities and make the right decisions. The third dimension enables individuals to create specific situations that result in the establishment of start-ups. The first and second dimensions above constitute learning for entrepreneurship (Bilić, Prka, & Vidović, 2011) in the sense that attention is paid to the orientation of the mindset of the individual, coupled with the ability to act out one's thoughts using acquired decision making and social skills.

In designing an effective entrepreneurship education program, Gibb (2002) detailed seven important points. They are paraphrased as follows:

1. Familiarizing students with uncertainties in their everyday life environments and enabling them to identify ways of managing them.
2. Enabling them to appreciate the right cultures and values that promote entrepreneurship activities.
3. Creating a pedagogy that promotes the development of entrepreneurial behaviours, skills and qualities.
4. Dealing with the ability to design an entrepreneurial organisation.
5. Enabling students to develop their capacities to learn to learn.
6. Providing programs that make students sensitive to context, and
7. Empowering them to learn how to add value to products and services appropriately.

These seven points form part of Home Economics education . When it is taught well, it equips students withElements of these seven points form part of the Home Economics programme offered at both senior high schools and university levels in Ghana (see Ghana Senior High Schools' Foods and Nutrition and Clothing and textiles and Management in Living Syllabuses). Examples abound in all these areas of the Home Economics education programme in Ghana. For instance, the foods and nutrition course have areas such as catering where students are taught to cost their foods and declare projected profits if given opportunity to sell dishes cooked during practical cookery lessons. In clothing and textiles, students learn fashion and design where they construct their self-garments, cost them and declare perceived profits should they sell them. Other examples include sewing flat articles such as chair backs, table runners, table cloths, place mats and kitchen linen. In management in family living course, students are taught to make articles such as earrings, hand bags, necklaces, and slippers out of beads, and interior decoration. When the topics in Home Economics courses are taught bearing in mind these seven points, students can acquire skills that may enable them to engage in entrepreneurial activities. These seven important points could be summarised as merging theory with practice in school syllabuses of which Home Economics education strives to achieve globally (Hipkins, Conner, & Neill, 2005; Street, 2006). On the contrary, the situation is not so in Ghana. These seven important points could be summarised as merging theory with practice in school syllabuses of which Home Economics education strives to achieve globally (Hipkins et al., 2005; Street, 2006). On the contrary, the situation is not so in Ghana.

Elements of entrepreneurship

Pro-activeness is crucial for anyone who desires to engage in entrepreneurial activities because it enables one to “act in anticipation of future problems, needs, or changes” (Lumpkin & Dess, 1996, 146). Ability to identify the needs of customers, learn from the signals in the marketplace leads to high returns. These enable one to become responsive to market signals and come out with the right products tailored to meet the needs of customers (Hughes & Morgan, 2007; Wang, 2008) as should be taught in Home Economics.

Risk-taking is another important element that enables people to engage in entrepreneurial activities. According to Lumpkin and Dess (1996), risk-taking is the extent to which an individual is prepared to make large and uncertain resource commitments such as borrowing heavily and committing a relatively high amount of time and expertise. According to Albuquerque and Hopenhayn (2004), an estimate of the compensation for the extra risk for entrepreneurial returns does exceedexceeds

public equity by at least ten percent (10%). Innovation is impractical if risk is not taken to turn the innovative idea into a physical product or service. Just as the right culture (environment) plays a key role in innovativeness, so does risk-taking. It is commonplace to note that pro-activeness and innovativeness have risk-taking embedded in them. One cannot be proactive by projecting into the future to address future needs without taking risk. Likewise, one cannot be innovative—thus arriving at novel ideas without taking risk since the outcome of both actions are mostly not known. They are conceptions of ideas and ideals in people's minds which manifest physically through investments in human and nonhuman resources. However, research reveals that countries with collectivist culture makes individuals to avoid uncertainty; become risk averse and avoid ambiguous situations (Hofstede, Hofstede, & Minkov, 2010; Lewis, 2006).

Factors that influence entrepreneurial activities

The literature abounds with factors that influence entrepreneurial activity and motivation for it. Key among these factors is higher levels of human capital, which leads to better performance (Fitzsimmons & Douglas, 2005). Thus, the individual's unique characteristics, value orientation and attitudinal position can influence their entrepreneurial inclination. Also, such inclinations depend on the expected usefulness of self-employment (Badal, 2010; Douglas & Shepherd, 2005). The first Gibb's (2002) seven important points listed earlier—familiarizing students with uncertainties in their everyday life environments and enabling them identify ways of managing them—endorses the creation of a type of culture that promotes entrepreneurship. OECD (2009), added to the discourse by stating that, entrepreneurship-friendly culture could be created and enhanced by the operations of educational institutions, government and industry.

In this paper, some variables that are potential indicators of work predisposition are identified. The respondents are attending either a traditional university or technical university (Polytechnic institutions upgraded to universities). Another major variable that makes major differences concerning job preferences is gender. Personality traits are an influencing factor. To determine the personality traits, we obtain responses on eighteen variables on personal characteristics that are considered as indicators of predisposition to job placement and employment status. The variables generally cover indicators such as readiness to take risk, ability to explore new ideas, the desire to be unique in approach to problem-solving, willingness to engage in social competition and have a sense of belonging. In the next section, we describe the methodology and how the indicators are transformed into salient variables that constitute the predictor variables for building the model.

Methodology

Data were generated from a sample of 1,414 undergraduates in seven universities (five traditional universities and two technical universities) in Ghana using a survey instrument developed from Langkamp Bolton and Lane's (2012) individual entrepreneurial orientation measurement instrument, which is made up of ten items (three risk-taking items, four innovation items, and three pro-active items). Twelve additional items identified from Bilić et al.'s (2011) case study of Croatia were included in the survey instrument to gather empirical data on students' behaviours and willingness to use additional opportunities such as: applying for scholarships, grants, participating in career fairs, plans after graduation, work preferences (public or private sectors), thinking about one's own business idea, having a business idea, already working on a business idea, and demographics. Responding to the questionnaires was voluntary. As a result, there was no uniformity in the numbers of respondents from the various institutions. The names of the universities are withheld due to anonymity. All the respondents were students in penultimate and final years who were majoring in fashion and design, and catering in technical universities, and family and consumer sciences or home economics (in traditional universities), and, have successfully completed the mandatory entrepreneurship course in their respective universities.

Two sets of variables that influence likelihood of preference for a job area and job status were identified in the data. The first set included gender, age and the type of university of respondents. The extremes of the data are observed to be 17 years and below, and 30 years and above. The data also depicted normal distribution for ages between 18 and 29 years. The ages were classified into two categories: young and old. Ages ranging between 29 years and below were considered young, while 30 years and above were considered old.

Participants were from two types of institutions, namely, the traditional university and the technical university (formerly known as polytechnics and now upgraded to technical university). Also, the level of the student was the number of years they have been in the university. The level captured only those in the penultimate and final years. The second set of variables was made up of latent factors extracted from the correlations among the indicators of predisposition to area of job placement and employment status.

Factor extraction

The indicators (Table 3) reflect respondents' predisposition to specific areas of employment and employment status. The extent of involvement in each of the indicators on a five-point scale is defined as: 1 *certainly not*, 2 *less occasionally*, 3 *occasionally*, 4 *frequently*, and 5 *always*.

These responses constitute the data for the factor extraction. Suppose that out of $p = 18$ indicators, there are m salient factors that underlie the correlations among them. The factors

$$f_j, (j=1, 2, \dots, m; m < 18)$$

together are assumed to explain the variation in each of the indicators x_i . Thus, by expressing (Equation 1)

$$x_i = \sum_{j=1}^m \alpha_{ij} f_j + \varepsilon_i \quad i = 1, 2, \dots, 18; \quad m < 18$$

based on this assumption, we can ignore the factors that are unique to the indicators because of individual uniqueness. From Equation 1, we can find the factors as (Equation 2)

$$f_j = \sum_{i=1}^{18} \beta_{ji} x_i \quad j = 1, 2, \dots, m$$

The weights, β_{ji} which are the loadings of the indicators on factor j , are determined by orthogonal factor rotation, and must be high (greater than 0.5) to associate an indicator with a factor. Thus, by factor extraction, the initial 18 variables were represented with a few latent factors that adequately explained the correlation among the initial indicators. Using Equation 2, we obtained data on the new estimated factors f_j represented by their factor scores. These factors were extracted because with a KMO value of 0.810 the correlation matrix was suitable for factor extraction. In addition, the latent dimensions were plausible.

Logistic regression modelling of employment intentions

Two main events have been defined:

1. that an undergraduate would prefer working in the private sector (to public sector) given their gender, age, institution of affiliation, level attained on program, and personal inclinations towards job creation.
2. that an undergraduate prefers to be an employer given their gender, age, institution of affiliation, level attained in program, and personal inclination towards job creation.

Below is a model for the log odds related to the response variable represented by each of the events described: $y = 1$ represents a classification of a respondent as one who prefers to work in the private sector, and $y = 0$ if he/she prefers the public sector. If we also represent all the k variables that influence this classification as X , and the probability,

$$P(y = 1 / X) = p$$

then a transformation of p gives the model (Equation 3)

$$\log\left(\frac{p}{1-p}\right) = \alpha_o + \sum_{r=1}^k \alpha_r x_r$$

The probability of the classification into the i th ($i = 1,2$) category for a respondent with a specified background information is then determined.

Analysis and results

Suitability of variables

The assessment of the suitability of the four background characteristics in each of the employment intentions is given in Tables 1 and 2.

Table 1 Background characteristics for preferred sector of work

Characteristics		Preferred Sector						Pearson Chi-Square Tests	
		Private		Public		Total		Chi-square	p-value
		Freq.	%	Freq.	%	Freq.	%		
Gender	Female	285	35.0	530	65.0	815	57.6	4.625	0.032
	Male	243	40.6	356	59.4	599	42.4		
Age Group	Young	481	36.2	848	63.8	1329	94.0	12.458	0.000
	Old	47	55.3	38	44.7	85	6.0		
Level	300	420	40.0	631	60.0	1051	74.3	12.021	0.001
	400	108	29.8	255	70.2	363	25.7		
Institution	Trad. Univ	297	48.3	318	51.7	615	43.5	55.793	0.000
	Tech Univ	231	28.9	568	71.1	799	56.5		
Total		528	37.3	886	62.7	1414	100.0		

Table 1 shows that for both genders, over half prefer to work in the public sector. This pattern of preference is the same for the level of the student. Most (94%) of the students were found to be in the youthful category (29 years and below). Among these, almost two-thirds prefer working in the public sector. A little more than half of the older category of the students, who constitute a minority, prefer working in the private sector. For both institutions, more than half of the graduates prefer to work in the public sector. The actual numbers are slightly higher for the technical university students than for the traditional university students.

The exploration showed a general inclination for preference for the public-sector employment irrespective of the background of the student. This observation was reflected in the test of association between the preferred sector and the demographic characteristics of students. The test was significant for all the demographic characteristics. This indicated that there was an association between the preferred sector and their gender, age, level of study and the institution they attend.

It is observed in Table 2 that there is a general acceptance for employee status. For each of the genders, close to two-thirds would prefer to be employed by someone. This pattern of preference was the same for the level of the student. Among the youthful category, close to two-thirds prefer to be employed by someone. However, for the older students, just a little over a half preferred to be employees. It is also interesting to note that preference for employee status was popular among students of technical universities. However, almost half of the university students would prefer to be employers. This pattern of preference was the same for older students. Thus, the acceptance for employee status was not overwhelming for specific background characteristics.

Table 2 Background characteristics for intended employment status

Characteristics	Intended Employment Status	Pearson Chi-Square Tests
-----------------	----------------------------	--------------------------

		Employee		Employer		Chi-square	p-value
		Freq.	%	Freq.	%		
Gender	Female	495	60.7	319	39.1	1.286	0.257
	Male	382	63.8	217	36.2		
Age Group	Young	833	62.7	496	37.3	3.559	0.059
	Old	44	51.8	40	47.1		
Level	300	627	59.7	423	40.2	9.605	0.002
	400	250	68.9	113	31.1		
Institution	Univ.	325	52.8	290	47.2	39.327	0.000
	Tech. Univ.	552	69.1	246	30.8		
Total		877	62.0	536	37.9		

This implies that it would be difficult to determine one's employment status based on only characteristics. This observation was reflected in the test of association between the preferred employment status and the demographic characteristics. The tests show that only the level of study and institution were significantly associated with employment status, but age was barely significant.

Determination of influential factors for job creation

Table 3 shows a four-factor rotated solution obtained from the correlation matrix of the indicator variables.

Table 3 Rotated component matrix

Behavioural characteristics	Component			
	1	2	3	4
Take bold action by venturing into the unknown	0.050	-0.001	0.672	0.146
Willing to invest a lot of time and/or money on something that might yield a high return	0.185	0.369	0.275	-0.013
Act "boldly" in situations where risk is involved	0.052	0.112	0.580	0.148
Like to try new and unusual activities that are not typical but not necessarily risky	0.040	0.038	0.627	0.006
Prefer a strong emphasis in projects that are unique, one-of-a-kind approaches rather than revisiting tried and true approaches used before	0.123	0.192	0.530	0.023
Prefer to try my own unique way when learning new things rather than doing it like everyone else does	0.179	0.417	0.399	-0.083
Favour experimentation and original approaches to problem-solving rather than using methods others generally use for solving their problems	0.019	0.358	0.422	0.135
Usually act in anticipation of future problems, needs or changes	0.011	0.525	0.270	0.051
Plan on projects	0.122	0.755	0.040	0.045
Prefer to "set-up" and get things going on projects rather than sit and wait for someone else to do it.	0.150	0.707	0.039	0.072
Belong to student organisations	0.129	0.307	0.029	0.494
Applied for scholarship	-0.028	-0.011	0.080	0.815
I have a scholarship	-0.051	-0.114	0.055	0.803
Actively participate in student competitions	0.149	0.133	0.181	0.566
Thinking about a business idea, if unable to find a job	0.662	0.249	0.119	-0.035
Already working on a business idea	0.816	0.039	0.071	0.090
Have a business idea	0.843	0.077	0.120	0.023
Like participating in career fairs	0.472	0.406	0.030	0.233

*Developed from Langkamp Bolton & Lane, 2012, Individual entrepreneurial orientation: Development of a measurement instrument

From Table 3, using a threshold of 0.5 for the factor loading, some indicator variables of the factors have their factor loading (highlighted) exceeding 0.5; making them a good representation of their respective factors. For the first factor, three indicators exceeded the factor loadings of 0.5. These variables relate to entrepreneurial inclination characteristics. Also, on factor two, three indicators had loadings exceeding the threshold of 0.5. These items relate to characteristics of pro-activeness. The third factor had four items with factor loadings exceeding the cut-off value. These items are related to risk-taking characteristics. The fourth factor has high loading on three indicators which relate to competitive behaviour. Thus, in order of importance, the four factors that influenced one's job creation tendency were entrepreneurial tendency, pro-activeness, risk-taking, and competitive inclination.

Models for determining preferred sector of job and employment status

Model 1: Determining preferred sector of work

The second column (B) in Table 4 gives the coefficients of the model in Equation 3. Only three variables were significant in the model. These are age (1) (i.e., an old student, above 30 years), institution (1) (i.e., technical university), and pro-activeness. The odds that an old student (above 30 years) would prefer working in the private sector were up to a little more than half that of a young student. This is an indication that young students were about twice more willing to work in the private sector than the elderly. Moreover, the odds that a technical university student would prefer work in a private sector were up to three times that of a traditional university student. This means that a technical university graduate would prefer working in the private sector much more than a traditional university graduate. Furthermore, the odds that a pro-active student would prefer to work in the private sector were 0.878 times working in the public sector. Thus, pro-active graduates would be more willing to work in the public sector slightly more than in the private. However, the confidence limit showed that such graduates could be as willing to find job in the private sector as in the public.

Table 4 Model for determining likely preference for work in private sector

Variables	B	SE	Sig.	Exp(B)	95% CI for EXP(B)	
					Lower	Upper
Gender (1)	-0.129	0.116	0.265	0.879	0.700	1.103
Age (1)	-0.928	0.239	0.000	0.395	0.248	0.631
Level (1)	0.059	0.160	0.712	1.061	0.775	1.453
Institution (1)	0.825	0.138	0.000	2.281	1.742	2.988
Entrepreneurial Intention	0.027	0.058	0.639	1.028	0.917	1.151
Pro-activeness	-0.131	0.058	0.025	0.878	0.783	0.983
Risk taking	0.047	0.057	0.405	1.049	0.938	1.173
Competitiveness	-0.101	0.057	0.078	0.904	0.808	1.011
Constant	0.090	0.120	0.453	1.094		

Note. Reference categories: public, female, young, level 300, traditional university

Additionally, the odds of the intercept of the model showed that if job creation factors remain the same, the odds of willing to work in the private sector was almost 1 for a young female student in traditional university who was in the penultimate year. Thus, such a student was as willing to find work in the private sector as in the public. In the model, Gender (1) (i.e., male), for example was not significant.

Model 2: Determining intended employment status

Table 5 contains the information on the model for determining the preference for being an employer instead of being an employee in terms of the eight variables used in Table 4. All except two variables were significant in the model. The two variables that were not significant were *level of the student* and *pro-activeness*.

Table 5 Model for determining preference for being an employer

Variables	B	SE	Sig.	Exp(B)	95% CI for Exp(B)	
					Lower	Upper

Gender (1)	-0.286	0.121	0.018	0.751	0.593	0.951
Age (1)	0.602	0.243	0.013	1.826	1.134	2.941
Level (1)	-0.089	0.163	0.583	0.915	0.665	1.258
Institution (1)	-0.627	0.141	0.000	0.534	0.406	0.704
Entrepreneurial Intention	0.648	0.066	0.000	1.913	1.679	2.178
Pro-activeness	0.002	0.060	0.975	1.002	0.891	1.127
Risk-taking	0.202	0.060	0.001	1.224	1.089	1.376
Competitive	0.144	0.059	0.014	1.155	1.030	1.296
Constant	-0.313	0.123	0.011	0.731		

Note. Reference Categories: employee, female, young, level 300, traditional university

From the model, male students' preferences for starting his own business were 0.751 times that of a female student. This means that female students had a greater preference for starting their own business compared to their male counterparts. Again, it was evident that the preferences of an older graduate starting his/her own business were up to three times that of a young graduate starting his/her own business. This means that older students preferred to start their own businesses than young students. The preference of a technical university graduate would start his/her own business was about half that of a non-technical university graduate starting his/her own business.

Again, a student with entrepreneurial intention who has a higher preference to start his/her own business after graduation was almost twice that to being employed by someone. A student who prefers to take risks to start his/her own business were about one and a half times that students who preferred being employed by someone. However, risk-takers students indicated a similar level of preference to being employees as being employers themselves. Preferences of risk-takers were almost the same as those who were competitive-minded.

Discussion

Assessment of extracted models

A logistic regression analysis was performed to assess prediction of preferred sector and employment status based on the extent of their income, gender and age group. The Hosmer and Lemeshow test statistic (in Table 6) indicates a good fit for both models with significance values much greater than 0.05. This indicates that the predictors significantly distinguish between preferred sector and intended employment status. Both models also achieved almost a two-third correct classification of observations.

Table 6 Model Summary for Sector Preferred and Employment Status as Dependent variables

Model	Model Summary		Hosmer and Lemeshow Test			Overall Percentage Classification
	-2 Log likelihoods	Nagelkerke R Square	Chi-square	df	Sig.	
1 Sector Preferred	1784.427	0.079	7.546	8	0.479	63.9
2 Employment Status	1702.326	0.157	4.764	8	0.782	67.4

Comparison of the two models

Although gender, age, level and institution were established as having a significant relationship with sector preference, Model 1 indicated that only age and institution were statistically significant in determining the likely preferred sector of work when job creation behavioural characteristics are considered. It is interesting to note that whereas pro-activeness was significant in Model 1, its influence in Model 2 was not significant. This means that pro-activeness may only be relevant in helping a graduate to secure employment, either in the private or public sector, but does not play a significant role in a graduate establishing his or her own business.

Some results appear inconsistent but are not incorrect. For example, it is noticed that in Table 1, 28.9% of technical university students expressed intention to work in the private sector, whilst 48.3%

of university students expressed similar intention. Thus, based on institution attended alone, the ratio was lower for technical university on the desire to work in the private sector. However, it was also noticed that in Model 1, the odds that a technical university student would prefer work in the private sector are up to three times that of a traditional university student. This result is obtained in the presence of other equally significant variables such as pro-activeness and age. This result is consistent with the result from Model 2 in Table 5. It was observed that, in that table, the odds of an old graduate starting his/her own business were up to three times that of a young graduate starting his/her own business. Thus, age is crucial in self-employment and hence, working in the private sector. The age distributions of the students showed that technical university students were generally older than traditional university students.

Contributions of Home Economics education

Home Economics education intervention

According to Roldan (2017), Home Economics education is a field that “integrates concepts, skills principles and theories of different subjects including foods and nutrition, housing and interiors, clothing, crafts, family life and child development for teaching and life application” (College of Home Economics Catalogue, 2006-2010, p. 157). In Ghana, the course is offered in three major areas namely foods and nutrition, clothing and textiles and management in family living. These areas of study have embedded entrepreneurship factors meant to equip students with knowledge, skills and competencies for sustainable job creation. Home Economics education is meant to prepare students to seek solutions to problems from multiple disciplines, tailoring them to suit specific populations (Brandes, 2017). Consequently, the need to have a critical look at Home Economics education for sustainable job creation in Ghana is key to the reduction of unemployment.

The existing gap in entrepreneurship abilities in university graduates in Ghana suggests the need for educational institutions to take Home Economics education at all levels seriously. In this vein, we propose that:

1. Entrepreneurial aspects of Home Economics courses should be strengthened to equip students with the ability to cost their practical lessons to identify profit margins. This will make students entrepreneurially oriented as they move from one level to another.
2. Emphasis should be laid on developing students' competitive mindset using case studies, and competitions among other strategies.
3. Home Economics departments in universities should create environments that encourage undergraduates to be inquisitive, proactive, innovative and risk-taking.
4. Home Economics teachers should equally develop their entrepreneurial abilities to effectively impart knowledge and skills to students. Also, they must be assertive in showing the importance of the course to school authorities to get their buy-in.
5. There is the need to make efforts to offset the drawback of the age factor that does not inspire young graduates to venture into self-employment. A way to overcome this drawback may be to include mentorship programs in the curricula.

These suggestions if taken into consideration may enable our graduates to translate their knowledge and skills into establishing their own businesses.

Conclusion

The study involved 1,414 students in technical and traditional universities in Ghana. It covered data on behavioural characteristics of students that are indicators of inclination to job creation, preferred sector of work, intended employment status, level of study, institution of study, gender and age of the students. The paper extracted the latent factors that underlie the indicators of inclination to job creation and found that only four factors are plausible. The four factors, in order of importance, were entrepreneur intention, pro-activeness, risk-taking and competitive factors.

The four identified factors, in addition to four background variables which were gender, age, level of program and the institution attended, were used to obtain separate models for preferred sector of employment and intended employment status after graduation.

There was a general inclination for work in the public sector among students irrespective of background. However, using the logistic regression modelling, it was observed that the preferred sector of work may quite reliably be determined by one's age, institution of study and pro-activeness of the student. On the other hand, the intended employment status could be determined by gender, age, institution of study, entrepreneur intentions, risk-taking and competitiveness inclinations of the individual.

However, it requires a lot of human capital to be an employer. Home Economics education in Ghana could champion this crusade through strengthening the entrepreneurial aspects of its courses to develop this human capital in universities for the benefit of entrepreneurship.

Biographies

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Married to property? Housing price and family formation revisited

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Abstract

This paper develops a two-stage marriage competition model to unravel the ambiguous relationship between housing prices and fertility rates in Hong Kong. Two types of effects are derived, namely equity effect and buyer's effect. Based on two surveys of young people in Hong Kong, the proposed model is validated with seven propositions. The main findings are: For people who do not own a property, that is, the generation experiencing the Asian Financial Crisis and the post-80s generation, increase in housing price leads to decrease in fertility rates. For homeowners, notably the generation who entered the housing market in the early 1980s and more recently the immigrant buyers, increase in housing prices leads to more housing asset appreciation, thus exerting a positive impact on fertility. The negative housing price effect of non-homeowners on baby delivery is offset by the positive equity effect on homeowners, and its aggregate effects are positive after 1997. It is concluded that young people are finding it increasingly difficult to access homeownership. Economic constraint seems to be the major impediment to younger generations' transition to independent living and family formation.

KEYWORDS: HOUSING PRICE, FERTILITY RATE, HOMEOWNERSHIP, HONG KONG, FAILURE TO LAUNCH

Introduction

In recent decades, declining fertility rates, reduced levels of homeownership and delayed household formation for young people became prevalent phenomena in many economies. Against this background, Hong Kong has experienced a dramatic change in the relationship between housing prices and birth rates. Before 1997, the movements of private domestic housing prices and birth rates were distinctively converse. However, the birth rate has moved consistently with house price thereafter. The interaction between housing prices and fertility rates seems ambiguous. On the one hand, family formation and childbirth may speed up homeownership acquisition, thus pushing up housing price. On the other hand, increasing housing price and home mortgage payments may squeeze out spending on bearing children, thus lowering fertility rates.

This study explores these competing views. Housing is a consumption good as well as a positional good. Homeownership is pivotal to one's participation in the "property led regimes" (Boyer, 2000)—wealth holding in terms of housing assets is crucial to the economic freedom of individuals. And not only is social life pervasively financialised, so are marriage prospects. In a survey of Chinese mothers reported by *Shanghai Daily* in March 2010 (Wei, Zhang, & Liu, 2012), 80% said they would object to their young daughter marrying a man who does not have a property. A more recent survey of young people in coastal China reported by *Horizon China (The Economist, 2013)* further revealed that three-quarters of women consider a man's ability to afford a home when choosing her husband. Indeed, escalating housing prices impose a heavy burden on young people in Hong Kong, and have become one of the central barriers to their independence and personal development.

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The belief that marriage is bound up with property is firmly held in both western and eastern societies. Housing is a key foundation for family formation. Different cohorts join the housing and labour markets at different points in time, and their access to homeownership is affected by distinct socio-economic conditions. A generation which fails to achieve homeownership at an early age may not catch up, and parental wealth has become a key factor in enabling some young people to form new households at an earlier age than others. Thus housing has important demographic effects. As housing is a large element of family wealth, volatility in housing prices may significantly affect a couple's decision of starting a family or having children. House price inflation has been a factor in pushing up the average age of marriage, the timing and number of children and hence lowering overall fertility rates. In China, for example, urban fertility rates are higher in cities where housing prices are lower and housing more spacious (Pan & Xu, 2012). Surprisingly, however, the annual birth rate has moved with the shift in house prices in Hong Kong since 1997 (see Figure 1).

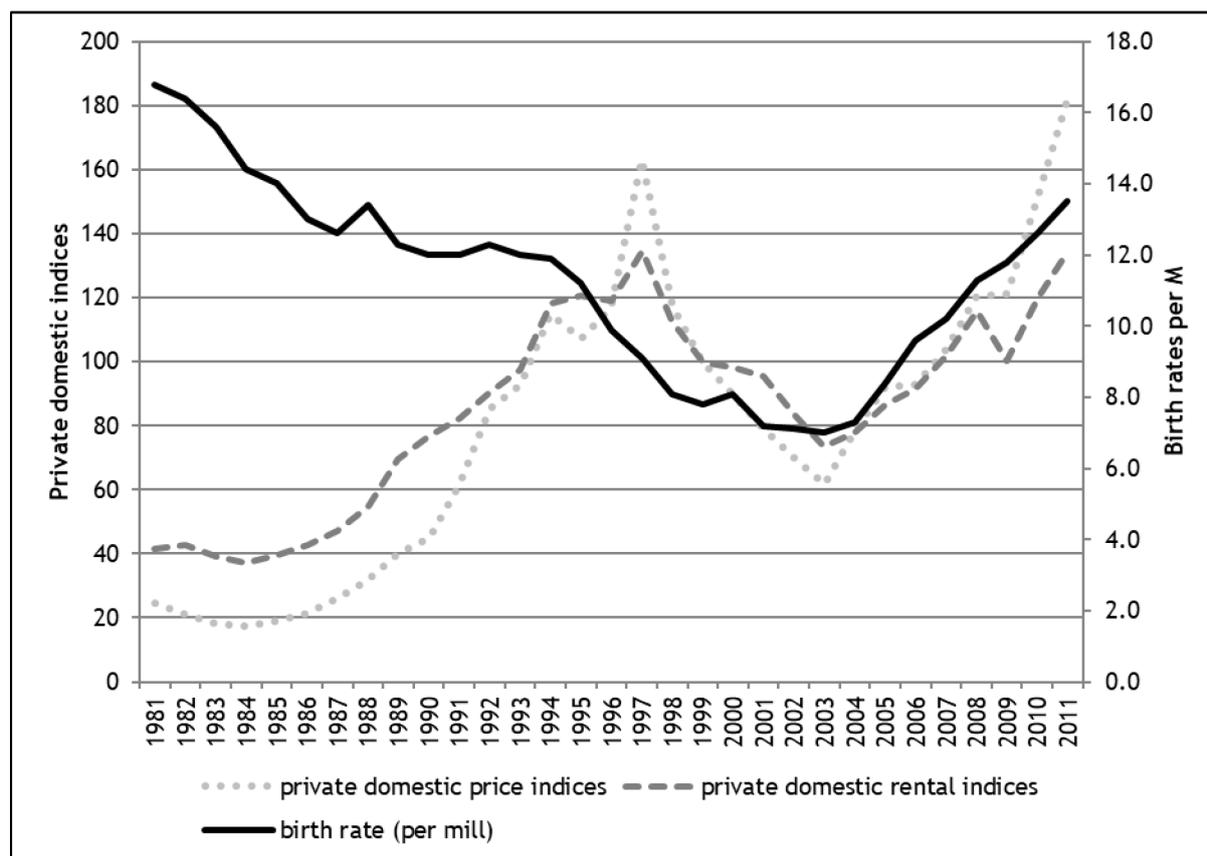


Figure 1 Birth rate and housing price in Hong Kong

Source: Private domestic price indices and private domestic rental indices are from the *Rating and Valuation Department Property Market Statistics*. Birth rate is from *Demographic Trends in Hong Kong 1981-2011*.

To better understand this phenomenon, a two-stage marriage competition model is constructed to examine the relationships among birth rates, housing prices and marital status, drawing on two surveys of young people's housing attitudes and aspirations in Hong Kong.

A marriage competition model

Assume a typical household experiences two stages of selection during family formation. At Stage I the couples decide whether they will get married. The couples who own a property are more likely to get married than others. For those who do not own a property, higher housing price would result in their lower willingness to get married. At Stage II the married couples decide whether they will have a baby. Those living in larger houses with better amenities and easier access to schooling are more likely to give birth. Homeowners are more likely to give birth when housing prices go up. Non-homeowners are more likely to give birth when housing prices go down.

To construct the model, consider an overlapping generation for two periods with two genders and two consumption goods (housing and others). The initial wealth of each person mainly depends on his/her parents, indicated by M_i ($i = 1, 2, \dots$ i for male) and F_j ($j = 1, 2, \dots$ j for female). Young people with wealthy parents and more family support in housing tend to live together. These are basic assumptions prior to their marriage competition and fertility selection.

At Stage I, each person chooses whether to enter the marriage market. Marriage takes place between men and women in the same cohort, and has a positive effect on the individual's utility function u_i (for man i) and u_j (for woman j). The positive marriage effect between man i and woman j is denoted by u_{ij} (≥ 0). The possibility that person i will get married is defined as δ_i ($0 \leq \delta_i \leq 1$).

At Stage II, each couple chooses whether to give birth. In the long run, a baby will give parents more satisfaction as the child grows up and becomes mature. However, in the early years a baby involves more work and expense for the parents, hence has a negative impact on their utilities. The possibility that couple ij will give birth is defined as λ_{ij} ($0 \leq \lambda_{ij} \leq 1$). Each person chooses to maximise his/her utility function through the following conditions:

$$\max \{u_i + P_i + \delta_i u_{ij} (1 - \lambda_{ij})\} \quad (\text{Equation 1})$$

The individual utility function is determined by three parts: parental wealth, personal wealth, whether married or have children. Those who have higher total utility are more likely to get married and have children. If one's utility is negative, a person would choose not to get married or have children. Higher housing price and more expensive consumption would reduce personal wealth and thus lower utility function. Assume percent of person i is used for housing expense, and percent for non-housing expense. The utility functions of Equations 1 and 2 thus become:

$$\max \{u_i (1 - h_i - c_i) + P_i + \delta_i u_{ij} (1 - \lambda_{ij})\} \quad (\text{Equation 2})$$

There is a significant difference between housing expense and non-housing expense. Compared with housing, non-housing goods are non-durables. Thus the impact of non-housing expense only exists in the current period. However, for homeowners housing expenses (in terms of instalment) will accrue in the long run to increase one's wealth and utility. Assume the depreciation rate of house i is d_i ; and consider a dummy variable for homeownership O_i , which equals 1 if it is owned and equals 0 if rented. The utility functions thus become:

$$\max \{u_i (1 - h_i - c_i - d_i) + P_i + \delta_i u_{ij} (1 - \lambda_{ij}) + u_i \sum_i h_i O_i\} \quad (\text{Equation 3})$$

To test the validity of this model, various propositions derived from the model will be tested. Below is a derived a list of propositions.

Consider the selection tree in Figure 2 with regard to Equation 3. At Pre-Stage, individual person i does not have marital status ($\delta_i = 0$) or child ($\lambda_{ij} = 0$). The person's utility function is:

$$u_i (1 - h_i - c_i - d_i) + P_i + u_i \sum_i h_i O_i \quad (\text{Equation 4})$$

The basic condition that an individual will be able to enter marriage is that their utility function prior to marriage is positive, for if they cannot take care of themselves, how they can be expected to take care of a family?

Now we can see that housing plays a key role in one's utility function. If housing price is high, meaning that it is large, then it is likely that $(1 - h_i - c_i - d_i)$ will be negative. There are several ways to increase utility, the most efficient of which is to live with parents ($h_i = 0$).

Proposition 1: If housing price is high, young people tend to live with their parents.

Another way to increase utility is to save/invest more, meaning to consume less (smaller); or to buy less (c_i smaller); or to buy a house so that O_i equals 1. In essence, both ways indicate less non-housing spending on one's own.

Proposition 2: If consumerism prevails, young people tend to live with their parents.

Perhaps the most direct way to increase utility is parental support for helping him/her either buy or rent a house ($P_i > 0$).

Proposition 3: Young people who receive more family support for housing tend to live independently.

Now we come to Stage I. Only those with individual positive effect prior to marriage are attractive to others (basic condition for entering marriage competition), and those with higher utilities are more attractive.

Proposition 4: Those who live independently are more likely to get married.

Family wealth may be deducted from whether the person owns or rents a house (O), for most young people would not be able to buy a house at their early career without family support.

Proposition 5: Those who own properties are more likely to get married.

We now come to Stage II. The couple decides whether they will give birth: Your expenditure for two may expand to three persons or more, and you will need a larger house. Compare the utility functions of Stage II to Stage I (number denotes stage):

$$\text{Stage I: } \max \{u_i(1 - h_{i1} - c_{i1} - d_{i1}) + P_{i1} + \delta_i u_{ij} + u_i \sum_i h_{i1} O_i\} \quad (\text{Equation 5})$$

$$\text{Stage II: } \max \{u_i(1 - h_{i2} - c_{i2} - d_{i2}) + P_{i2} + \delta_i u_{ij}(1 - \lambda_{ij}) + u_i \sum_i h_{i2} O_i\} \quad (\text{Equation 6})$$

Some factors remain the same between Stage I and Stage II, such as depreciation rate ($d_{i1} = d_{i2}$) and parental wealth ($P_{i1} = P_{i2}$). Other factors have changed: typically consumption ($c_{i1} < c_{i2}$) and housing expenditure ($h_{i1} < h_{i2}$) will increase. If they own a house, the positive factor $u_i \sum_i h_{i2} O_i$ will offset the negative impacts of increased expenditure on child rearing. It is even better if housing prices go up—an equity effect for homeowners.

Proposition 6: Those who own a property are more likely to give birth if housing prices go up (the equity effect).

Last but not least, we discuss the situation that a couple who rented housing at Stage I ($O_{i1} = 0$) buy a house at Stage II ($O_{i2} = 1$), or remain living in rental housing ($O_{i2} = 0$). The change for housing tenure ($O_{i2} = 1$) would transform the utility function into:

$$\text{Stage I: } \max \{u_i(1 - h_{i1} - c_{i1} - d_{i1}) + P_{i1} + \delta_i u_{ij}\} \quad (\text{Equation 7})$$

$$\text{Stage II: } \max \{u_i(1 - h_{i2} - c_{i2} - d_{i2}) + P_{i2} + \delta_i u_{ij}(1 - \lambda_{ij}) + u_i \sum_i h_{i2}\} \quad (\text{Equation 8})$$

The effect of home purchase on fertility is not clear. The negative impact of giving birth can be offset by the positive effect of owning a property. Whether the aggregate effect will be positive or not

depends on the timing of purchase. It is named as a buyer's effect for home buyers. If there is no change on housing tenure, the utility function is uniform to Equation 7.

Proposition 7: The buyer's effect of home purchase on fertility is unclear.

The next section provides a detailed description of the survey data.

Data structure

The survey data includes 1,008 young people in Hong Kong aged 18 to 35 in Round 1 (without asking their gender) and 700 individuals in Round 2. Table 1 shows the data structure of the second round of survey compared with Hong Kong census survey.

Table 1 Breakdown of Hong Kong Census and Survey Populations

Gender		Census Population	Survey Population	
Male (Age 18-35)		615230	327	
Female (Age 18-35)		602903	373	
male: female		01:01.0	01:01.1	
Age band		Census Total	Survey Total	
A1 (18-24*)		446133	351	
A2 (25-29)		351900	160	
A3 (30-35**)		420100	189	
A1:A2:A3		1: 0.79: 0.94	1: 0.46: 0.54	
No. of household members	%	Overall census***	1st survey	2nd survey
	1	27.6	6.1	6
	2	30.6	27.8	28.6
	3	20.3	37.8	39
	4	13.9	19.3	19.1
	5	5.8	5.5	4.9
	6+	1.9	2.6	1.6

Notes. *This number for the overall census population was obtained by using 40 % of Group 15-19 plus Group 20-24. Source of Data: "Population by Sex, Age Group and Place of Birth, 2011".

** This number for the overall census population was obtained by using Group 30-34 plus 20 % of Group 35-39. Source of Data: "Population by Sex, Age Group and Place of Birth, 2011".

*** This number for the overall census population was obtained by using 28 % of Group 25 plus Group 25-29 plus Group 30-34 plus 20 % of Group 35-39. Source of Table: Li (2014)

Table 2 shows the educational and occupational distribution of the first round of survey compared with Hong Kong census survey. The survey data is more representative of the educational level than of occupation structure compared to the census data.

Table 2 Young people's composition of census and survey population

Education Level	Survey	Census*
Secondary school and under	49.3	52.2
Diploma or certificate	12.5	7.7
Sub-degree course	4.6	8.5
Degree course	27.7	31.6
Postgraduate and above	5.9	
Occupation Structure	Survey	Census**
Managers and administrators	9.6	7.1

Professionals	14.7	8.4
Associate professionals	14.8	22.6
Clerical support workers	25.8	20.0
Service and sales workers	22.7	18.0
Crafts and related workers	3.1	4.9
Plant and machine operators	2.2	2.1
Skilled agricultural and fishery workers	0.5	0.1
Elementary occupations	2.9	16.8
Unemployed	3.7	n/a

Note. * This ratio for the overall census population has been estimated by taking 40% of Group 15-19 plus Group 20-34 plus 20% of Group 35-39. Source of Data: "2011 Hong Kong Population Census".
 ** This ratio for the overall census population has been estimated by taking 70% of Group 15-24 plus Group 25-34 plus 10% of Group 35-44. Source of Data: "2011 Hong Kong Population Census".
 Source of Table: Li (2014)

Positional good or investment tool

Housing is generally regarded as a normal (or consumption) good, thus housing demand is positively associated with household's incomes. Still, there is a strand of literature which encompasses the status (positional) good nature of housing. The desire for relatively higher social status may affect one's spending patterns. Hence positional goods usually reflect the unique social status of only a minority of people (Hirsch, 1977). As homeownership expands, however, the status characteristics of owning a property are likely to diminish (Forrest & Murie, 1983). In other words, the positional value of housing is higher if homeownership rates fall. If the status of housing is considered, the intensity of marriage market competition can have significant and positive effects on housing value (Wei et al., 2012). When the male to female ratio in the pre-marital age cohort increases, homeownership becomes an advantage to people in establishing marriages. Over 55% of respondents in our survey (2014) said that people who have properties have an advantage in looking for a partner, in line with Proposition 5. Besides, our survey shows that marriage is the top motivation for young people to live independently, 79% said they will leave home once getting married or having a partner (see Table 3). This observation also echoes Proposition 4.

Table 3 Likely reason for wanting to leave home

Depart home because (%)	Age 18-24 <i>n</i> = 351	Age 25-29 <i>n</i> = 160	Age 30-35 <i>n</i> = 189	Age 18-35 <i>N</i> = 1004
Getting married or having partner	77.0	80.6	74.8	79.0
Living in school dormitory	36.1	15.7	20.0	26.7
Studying elsewhere	39.0	26.1	21.7	31.8
Earn/save enough money	42.2	44.0	43.5	43.0
Reaching a certain age	33.2	22.4	23.5	28.7
Find a job far away from home	30.4	23.1	33.0	26.9

Note. Source: Li (2014)

Some literature argues that people who grow up in periods of economic booms tend to have higher expectations of their careers and higher aspiration of living standards (Attanasio, Blow, Hamilton, & Leicester, 2009; Wu, 2010). Unlike their parents, who were born in post-war reconstruction times but experienced the subsequent boom in the local economy, the younger generations in Hong Kong were born in the period of economic prosperity. Having higher life expectations than their parents but facing more uncertainties in a more volatile environment, their earnings are not comparable to their parents (see Figure 2). When the manufacturing sector shifted to mainland China, experienced workers were compelled to enter the low-end service industry, thus squeezing out job opportunities that would have normally gone to young people (Forrest & Yip, 2014). Also, the Hong Kong economy has worsened in terms of stagnant per capita real income, increasing job insecurity and intensified

social polarization, thus the average salary for fresh university graduates has not increased since 2005 (Wu, 2010). And even for the more affluent middle-age, there is another argument that Hong Kong people are in fact “income rich but housing poor” (Forrest & Lee, 2004).

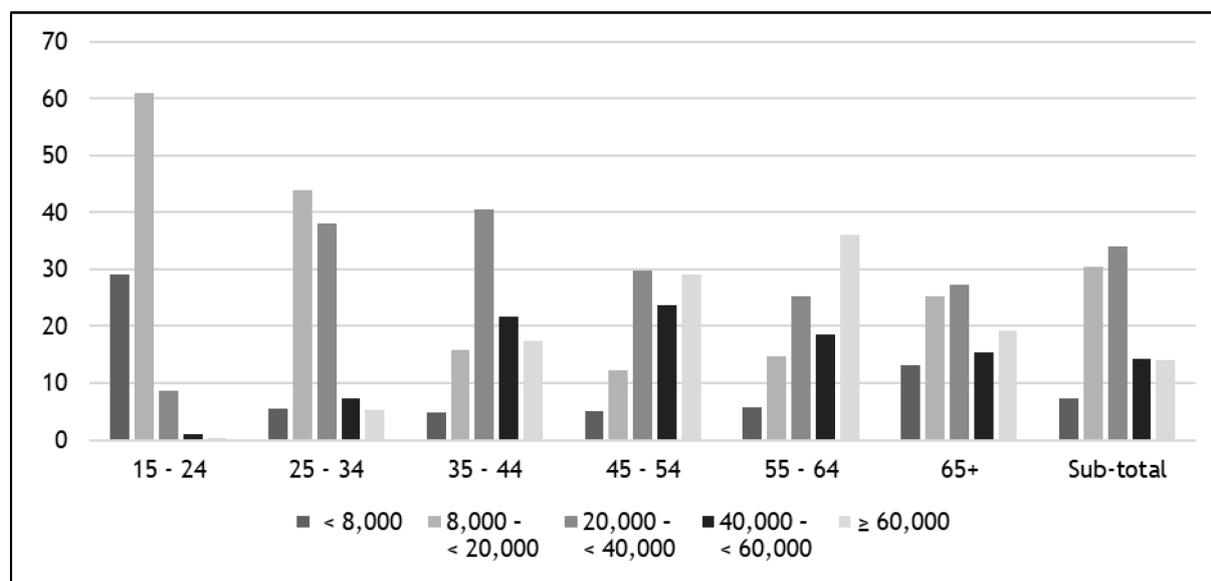


Figure 2 Working Populations by Age Group and Monthly Income from Main Employment, with University Degrees in 2011

Source: Author's recalculation of microcensus data based on 2011 Hong Kong Population Census

Economic downturns may undermine young people's willingness to buy property and confidence in homeownership, for they are most vulnerable to housing price collapse. Among our respondents, 65% lived in privately owned housing. Yet 74% of these dwellings were owned by their parents, while only 11% were owned by young people themselves (among which 3% by their partners, and 4% jointly owned by the couple), which is consistent with Proposition 3. Over 65% said they could not afford to live anywhere else, in line with Proposition 1. A rising trend is that young people want to become independent but most cannot. This *failure to launch* argument stems from the transition of “emerging adulthood” into self-sufficient person (Arnett, 2004). This survey has demonstrated a strong tendency of young people to live with their parents: three-quarters were living with their parents, 21% with their partners, and less than 1% with their friends or on their own (see Table 4, with reference to Proposition 1). For the 18-24 and 25-29 age cohorts, the living-with-parents figures were higher than 80%. Even for the 30-35 age cohorts, more than 60% of respondents were still living with their parents.

Table 4 Current housing preference of young people

Living arrangements		Age 18-24 n = 351	Age 25-29 n = 160	Age 30-35 n = 189	Age 18-35 n = 1004
Living with (%)	Parents	89.2	83.2	60.5	75.7
	Partners	8.5	14.3	35.7	20.9
	Friends	0.0	0.6	1.1	0.3
	Alone	0.9	0.6	0.5	0.9
	Other	1.4	1.2	2.1	2.3
Prefer to live (%)	With parents	96.8	94.8	93.9	95.5
	Somewhere else	29.3	26.6	35.5	29.3

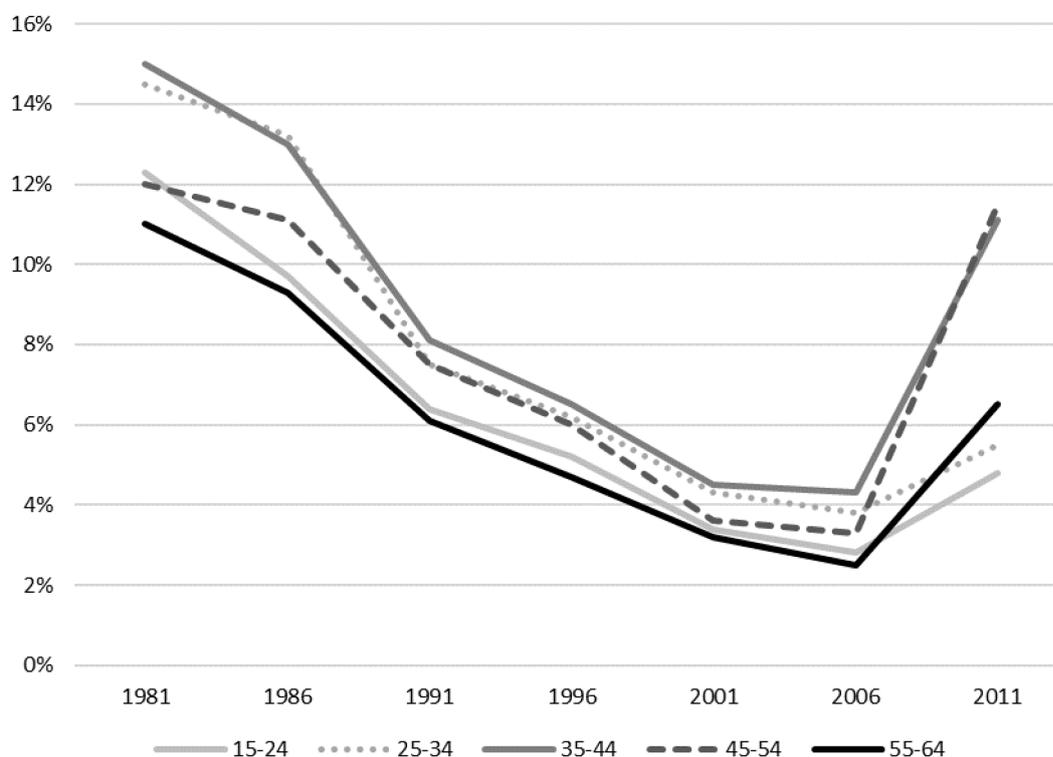
Note. Source Li (2014)

Wealth accumulation in Hong Kong is less determined by male participation of labour markets. Compared to other low-fertility Asian economies, such as Singapore, Japan and Korea, Hong Kong has lower fertility rates as well as labour force participation rates, both males and females (Straughan,

Chan, & Jones, 2008). These observations strengthen Forrest and Lee's (2004) argument that wealth accumulation of household in Hong Kong is largely dependent on housing asset appreciation. In fact, Homeownership stands out as a pivotal tool for personal wealth deposit and accumulation in Hong Kong.

Therefore, the equity effect of homeownership on fertility deserves peculiar attention. Earlier literature argues that wealthy parents tend to have fewer children because: a) higher income families have less time to spend with their children (Becker, 1965); b) higher income families prefer life quality over having more children (Becker, 1960). However, a recent empirical study suggests that when the proportion of homeowners in a society increases, a rise in housing prices leads to an increase in fertility rates because people tend to spend part of their equity gains on rearing children, thus increasing total fertility rate (Dettling & Kearney, 2014). While both standpoints may hold some truth, the age-period-cohort literature of Hong Kong concludes that cohorts who entered housing market in the late 1980s experienced rapid asset appreciation fuelled by generous government assisted homeownership schemes and a buoyant local economy, while those who entered homeownership in the late 1990s had much less favourable policy and economic environment, or never caught up the housing ladder afterwards (Forrest & Lee, 2004; Yip, Forrest, & La Grange, 2007). A significant decline is observed for private homeownership rates of age group 25-34 (see Figure 3), from 13.2% in 1986 to 7.5% in 1991, followed by continuous decrease until its trough of 3.8% in 2006. Considering the equity effect, relatively few people have benefited from housing wealth appreciation and could spend more on child rearing in the 1990s and early 2000s. Similar trends are observed from other age groups, but a sharp increase in homeownership from 2006 to 2011 is observed for those aged 35 or above. While factors underpinning such change require further discussion, at least it suggests an increasing number of people have equity advantage to enhance their levels of childbearing (refer to Proposition 6).

Figure 3 Proportion of Private Homeownership of Different Age Groups (excluding HOS/TPS)



Source: Author's re-analysis of census data based on Housing in Figures

Why failure to launch

It is too early to conclude that the consistent movements of housing price and birth rate will persist in Hong Kong, for the choice of post-80s generation who are entering marital ages is difficult to forecast. Drastic ups and downs of the financial market have made young people less secure about

their income prospect, which may have significant effect on their conceptions of and behaviour towards housing. Later entry to homeownership is partly because of an unrelenting upswing of property prices since the trough in 2003, partly an undersupply of new houses due to the government's limited housing land supply policy, and probably a precautionary measure against property market collapse. Nearly half of our respondents aged 18 to 29 said they will stay more than two years with their parents. Almost 40% of those aged 30 to 35 don't know how long they will stay living at home. The reasons are multi-faceted: housing prices in Hong Kong have escalated to record highs; the financial crisis has led to unstable employment; longer education and rising costs have increased the burden of debt repayment once they graduate; and inadequate space for independent living contradicts their ambitious expectation of life. Longer homestay certainly leads to young people's delayed marriage (refer to Proposition 1 and Proposition 3): Less than 30% of males aged over 30 years old were not married in 1981, while in stark contrast 50% of the same age group were not married in 2011. For females aged below 30, in 1981 only 30% were unmarried, while in 2011 the figure rose sharply to 70% (C&SD, 2012).

Failure to launch is one part of the whole picture. Familyism exerts an influential impact on the younger generation as well. In this survey, almost 90% respondents said they could take care of their parents, and more than 70% said their parents could take care of them. Over 85% of the respondents agreed that Chinese people should preserve strong family ties, with less than 30% stating they should leave home earlier. Strong family ties, the norm of staying with parents until marriage, a greater degree of financial dependence on parents in exchange for more independence in terms of lifestyles and attitudes, are certainly key cultural and institutional elements accounting for the younger generation's longer co-residence with parents (Forrest & Yip, 2014). Such paradoxical dependent independence could lead to more intergenerational friction and conflicts, but this survey provides an insight for Hong Kong: less than 20% thought it inconvenient to live with parents. Only 11% of our surveyed respondents said they were homeowners and almost three-quarters of homeowners were the respondents' parents or parents-in-law, who were mainly responsible for repaying the mortgages. Almost 60% of parents or parents-in-law remain the major financial supporters for young people's housing rent (refer to Proposition 3).

Postponed departure from parental home may result in a lack of self-financing motivation for young people who seek their own property. Yet the major merit of prolonged parental homestay is, at the cost of less intimate relationship, closer family ties, a strategic balance between individual freedom and filial piety. Our survey also shows that most young people are not attracted to the idea of sharing a house with their friends, in contrast to their greater intention to live with parents. The economic merit is that young people tend to be more conservative in housing purchase, but more aggressive for non-durable goods consumption. Such consumerism makes young people who are more vulnerable to income loss immune to potential bankruptcy risks, yet also leads to their late marriage (refer to Proposition 2).

Conclusion

The co-movements of housing prices and birth rates in Hong Kong since 1997 have been intriguing. Intuitively, the interaction between housing prices and fertility rates is contradictory: on the one hand, family formation and child rearing may speed up homeownership acquisition, thus pushing up housing price. On the other hand, increasing housing prices and mortgage payment may squeeze out spending on bearing children, thus lowering fertility rates. Due to imbalances between house prices and incomes, prevalence of consumerism, unstable employment, longer schooling and rising education costs, and an uncertain economic environment, Hong Kong has seen a decline in private homeownership rates. It is understandable that homeownership decreases when housing prices in Hong Kong have escalated to historical record highs. Yet it is not easy to understand why birth rates have kept increasing with reduced levels of homeownership and with young people delaying the formation of households over the past two decades or so. Classical demographic theories do not seem to explain this phenomenon well.

This study develops a marriage competition model to investigate these issues. For people who do not own a property, notably the generation experiencing the Asian Financial Crisis and the post-80s generation, the increase in housing price leads to a decrease in fertility rates. For homeowners, notably the generation who entered the housing market in the early 1980s and more recently the immigrant buyers, increase in housing prices leads to more equity wealth, thus exerting a positive impact on birth. The negative price effect of non-homeowners on family formation is offset by the

positive equity wealth effect on homeowners, and its aggregate effect seems to be positive after 1997. Various other factors may affect this phenomenon: Notably varying cohort effects on job markets at different time horizons, relaxation to Mainland buyers and immigrants, and the impact of higher education expansion.

In conclusion, economic constraints seem the major impediment to younger generations' transition to independent living, family formation, and giving birth. Despite that homeownership may provide a sense of belonging and self-dignity, and may be advantageous for young people seeking partnership, it is not essentially related to their capacity of buying properties (Li, 2014). Instead, it may only be an indication of parental support for those young homeowners, while for those who lack parental support housing pathways may be longer homestay before owning their properties (Li, 2014). Future research shall be focused on empirically testing the relationship between failure to launch and low fertility rate in Hong Kong.

Biography

Jing Li is an Assistant Professor at the Department of Geography and Resource Management, the Chinese University of Hong Kong (CUHK). Previous work experiences include Department of Public Policy, City University of Hong Kong; and Department of Building and Real Estate, The Hong Kong Polytechnic University. His main research areas are housing policies, urban studies and sustainable development. His articles appear in journals and think tanks including Urban Studies, Environment and Planning B, Habitat International, Cities, Journal of Urban Planning and Development, Energy Policy, Journal of Cleaner Production, Journal of Construction Engineering and Management, and the Asian Development Bank Institute (ADBI) working papers.

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Home Economics Baby Boomer professors in retirement: inaugural study

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Abstract

This paper contains the report of the results of an inaugural study of home economists in retirement, inspired by the presumed negative implications to the profession of the retirement en masse of the interdisciplinary, integrated-oriented baby boomer professoriate. The descriptive research design (email survey, closed and open-ended questions, purposive sampling) was informed by a 'chain, stain and pain' conceptualisation of retirement, respectively still tied to work, a tainted retirement (dark emotions), and transitional changes. Descriptive statistics and thematic analysis revealed that all six female respondents (four countries, two continents) experienced retirement chains, stains and pains but overall they enjoyed their careers and were equally enjoying retirement. The anticipated existential angst did not materialise, despite expressed obligations to the profession. Although most noted concern for the profession's future (fragmentation, specialisation, and philosophical lacuna), they concurrently envisioned hope and expressed confidence that the remaining professoriate could future proof it. Future research recommendations are tendered.

KEYWORDS: HOME ECONOMICS, RETIREMENT, INTERDISCIPLINARY, FUTURE PROOFING, PROFESSORIATE, BABY BOOMER

Introduction

Like many long-established disciplines and professions, home economics (family and consumer sciences (FCS), human ecology, human sciences) is facing the demographic reality of retiring baby boomers. Born between the middle 1940s and early 1960s, they range in age from 57-77. With the concurrent trends of early and delayed retirement (Carrière & Galarneau, 2011; Wan, Goodkind, & Kowal, 2016), the home economics profession and discipline face the possibility of losing hundreds, maybe thousands, of active practitioners as they enter their retirement life phase. The 'greying of the home economics profession' is the new normal (Dixon, 2017), especially the ageing of the professoriate who teach and socialise the next generation. The professoriate comprises home economists working within higher education settings as instructors, administrators, or both.

The ageing of this cohort will have a major impact on the future of the profession and the discipline, partly because many home economists were socialised to be generalists rather than specialists. This education oriented them toward an interdisciplinary, integrated philosophy of practice. McGregor (and colleagues) (2015) observed that as the baby boomer generation of home economists retires *en masse*, universities that do not cancel programs often hire people who are not home economists or FCS. Examples include sociologists to teach family, psychologists to teach individual growth and

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development, business and marketing scholars to teach consumer behaviour, and health scholars to teach wellness and wellbeing.

This hiring trend means the millennial generation of home economists (whose average age is 24) is likely being taught by people who may lack knowledge about our history and the philosophy of the field, let alone the interdisciplinary knowledge base as the old guard knows it. Indeed, in addition to teaching, their influence enters the realms of mentoring, research and professional coaching. This development (although not new) does not bode well for future proofing the profession, wherein we “anticipate future developments to minimize negative impacts and optimize opportunities” (Pendergast, 2009, p.517), always to ensure relevancy, viability and vitality. A future-proofed profession cannot be superseded by unanticipated future developments because it has strategically planned its effectiveness in the face of change (McGregor, 2011).

Literature review

The retirement literature contains information about how university professors perceive retirement before they have retired, but little research addresses the retired faculty members’ actual retirement experience (Fishman, 2012), with this perspective totally lacking in the home economics literature. The following literature review recounts several prevailing lines of thought in the university faculty retirement literature, factors that inform the aforementioned trend of baby boomer retirement within home economics: voluntary or involuntary retirement; early, planned or delayed retirement; the professor’s unique ‘life of the mind’; and the life course perspective, which views retirement as a major life transition. As an after-the-fact caveat, this literature provided a valuable background for interpreting the data despite that some studies are from the nineties.

Transitioning into retirement can take several years, during which people’s perceptions of their life can change along key dimensions: social, psychological, physical and economic (Floyd et al., 1992; Hershey & Henkens, 2013; Loureiro, Mendes, Camarneiro, Silva, & Pedreiro, 2016). Navigating the retirement process is a complicated affair because prior attachments do not evaporate overnight (Bingham, 2016). Many faculty retirees want to remain involved and be of service. They have thoughts and ideas about education, their discipline and profession that could pay huge dividends for future practitioners (Fishman, 2012; MacLachlan, 2016). These thoughts tie in with the timing of the retirement decision, and the degree of volition (i.e., conscious choice, intent and decision).

Voluntary and involuntary retirement

One key aspect of retirement is whether the decision is voluntary or involuntary, with the latter linked to negative effects on health, the psyche and marital status (Floyd et al., 1992; Hershey & Henkens, 2013; Loureiro et al., 2016). Involuntary retirement is associated with both a very negative initial crisis period and negative long-term changes into retirement compared to those who retire of their own volition (Floyd et al., 1992). Even when retirement was mandatory, university professors tended to say they retired for reasons other than being forced to (54%) (i.e., involuntarily), including being able to afford retirement and wanting more leisure time (McMorrow & Baldwin, 1991).

Early, planned and delayed retirement

The timing of retirement is another issue, whether it be early, as planned (phased or immediate) or delayed. In Canada, where retirement at age 65 is no longer mandatory (as of 2006), a third of Canadian university faculty members are expected to work beyond the traditional 65 retirement age (MacLachlan, 2016). This number reaches 75% in the United States (Teachers Insurance and Annuity Association of America [TIAA], 2014), where half of all faculty members are aged 50 and older (Bland, Risbey, Berberet, & Brown, 2004). The United States revoked mandatory retirement in the 1990s (Rapoport, Finlay, & Hillan, 2015). Rapoport et al. (2015) recounted American literature that found that (a) less productive faculty members opt for early retirement, (b) most senior faculty members want to work post-retirement age, but few actually take the option, and (c) women faculty tend to retire when they are ready to not when expected to.

TIAA (2014) coined the term *reluctant retiree*, reporting that most (65%) American university faculty members were reluctant to retire desiring instead to work beyond the age of 67 because their work was intellectually stimulating. Their reluctance stemmed from being at a loss for what to do after life in the academy. Their job defined them and was a key source of their life satisfaction (83%).

Pragmatically, many (77%) professors were reluctant to retire because of financial uncertainty, and the loss of health insurance benefits (67%) (see Bland et al., 2004).

Some faculty members resist retirement because they are not done what they came to do; that is, they want to leave a legacy for their discipline, profession or institution (Ferren as cited in ACE-Sloan Projects on Faculty Career Flexibility, 2010; Maril, 2014). Some professors view retirement as disappearing from the university, discipline and profession or some combination. “The current retirement culture [within higher education] renders people marginalized and invisible” (Friedman & Cullinane, 2013, p. 8; see also Allison, Thomas, & Larschan, 2016). “When retirees are provided meaningful opportunities for engagement and the opportunity for a continued sense of belonging through teaching, research, mentorships, or consulting, retirement becomes ‘thinkable’ for hesitant faculty” (Friedman & Cullinane, 2013, p. 9).

Rapoport et al. (2015) profiled Canadian university professors who both delayed retirement and phased into early retirement. They delayed retirement because they (a) were at the peak of their career, in the center of their field, and still immersed in their work; (b) felt they still had a huge capacity for new thought, ideas, methods and technologies; (c) were fascinated with the sophisticated work of their graduate students; and (d) felt they themselves had many years ahead of academic productivity. On the other hand, professors said they phased into early retirement because they were experiencing either (a) inequities in the system or (b) disadvantageous changes in their work environment, or they (c) wanted to spend more time with family or (d) no longer enjoyed teaching.

A study conducted when American retirement was mandatory found that half (45%) of surveyed university professors said they retired because they had to. The other half said they retired because they either felt they could afford to or wanted more leisure time. They did not retire because of declining health, a reduced interest in teaching or scholarship, or because they wanted more time for intellectual activities (McMorrow & Baldwin, 1991). In another study, senior faculty members said they would consider retiring *early* if they felt they were not attaining their desired job performance, felt burned out, were dissatisfied with their work environment, or were unappreciated by their colleagues or the institution (Bland et al., 2004).

Maril (2014) observed that his academic age cohort tended to retire from university couched in feelings of anger about entitled students, negative trends in higher education, being under-recognised, and not being done yet. They drifted into a disillusioned retirement, losing touch with the discipline and lifelong colleagues. In contrast, Allison et al. (2016) painted a positive and affirmative academic retirement picture. Most of their “academic contemporaries [do not] admit to complete retirement. There are multiple kinds of semi-retirement [and] multiple retirement is the order of the day” Nonetheless, Allison et al. (2016) did recognise that professors have to let go and “let younger people get on with it.” Those who cannot let go of academia experience “the lingering effect.” They continue teaching, researching and working with students, years into their retirement years. The academic’s unique ‘life of the mind’ may help explain this pattern.

Unique ‘Life of the Mind’

The general public tends to retire due to job stress, employers’ pressure to leave, a desire to pursue their own interests, and health reasons, age, or other circumstances (Floyd et al., 1992). University faculty tend to match this profile but also have unique reasons for retiring, mostly related to research and scholarship, teaching, and service, to either continue or discontinue them. Retirement for this group is challenging because they live “‘the life of the mind’” (Working Group on Faculty Retirement, 2012, p. 25). For the most part, their work is cerebral, entailing the pursuit of intellectual activities. McMorrow and Baldwin (1991) found that the most common reason professors gave for not enjoying retirement was missing intellectual interactions and intellectual activities. Nearly a quarter century later, one of the greatest needs of retired faculty is *still* the need to exercise their intellect (Friedman & Cullinane, 2013).

The Home Economics dilemma

From a life course perspective, the context surrounding the transition into retirement is expected to affect people’s perceptions of retired life. People have been embedded in an organisational or work context for many years, replete with its own nuanced circumstances. Transitioning from this context

to another can boost or erode confidence in the retirement decision. Retirement is a critical life event (Floyd et al., 1992; Hershey & Henkens, 2013). In the case of home economics, this event is now critical to the life of the profession and the discipline as we know it.

Retirement also constitutes a significant role transition (Hershey & Henkens, 2013). For retiring home economics university professors, it means leaving the pivotal role of socialising the next generation (see McGregor, 2011). For those invested in this role, retirement could lead to a diminished sense of self-worth, and a reduced satisfaction with professional identity and disciplinary contributions. Transitioning to retirement means figuring out how to make a different or ongoing contribution and defining a new sense of purpose (Wharton University of Pennsylvania, 2016).

In this study, the term old guard infers to guardians of the profession whose long investment is of interest. Most old guard home economics practitioners were socialised to see themselves as working for the good of society and humanity by strengthening individuals and families as a social institution. They were taught the merits of drawing on three sources of information and insights to help people to identify and solve problems: (a) an interdisciplinary knowledge base, (b) the home economics knowledge base, and (c) the individual and family's knowing and perspectives. Especially with the advent of Brown and Paolucci's (1979) three systems of action concept, many home economists were taught to integrate these three ways of knowing so as to help people address their daily and perennial problems (McGregor, 2008, 2009).

For some home economists, the mantra of a holistic, integrated and interdisciplinary philosophy became their life's work, and shaped their self and professional identities. This is illustrated in the recently-edited collection about American home economics leaders (active and retired) who contributed to advancing the quality and impact of the profession (McFadden, Ball, & Wootton Booth, 2016). Opportunities to socialise upcoming generations to the old guard's professional philosophy and approach may be curtailed upon the baby boomers' retirement from higher education institutions. This curtailment has the potential to really threaten the profession.

This threat is exacerbated because home economics lacks an understanding of the evolution of its academic profession in a long time perspective. "An academic trajectory is the evolution of an individual academic from the moment of choosing his/her field of specialisation and decision to work in the academic market through his/her retirement" (Kuri, 2005, p.3). Future proofing the profession requires studies about home economists in retirement because their departure can be viewed as a loss or an opportunity for the profession and discipline.

Research questions

The growing trend of retiring home economics professors, in effect, the loss of the old guard, prompted the following research questions:

1. How do they feel about retiring from a profession and discipline that they have contributed to for most of their lives?
2. What does it mean to them that they will no longer be actively involved formally socialising the next generation of practitioners?

Conceptual framework

To address these research questions, Bingham's (2016) simple conceptualisation of retirement was used, called the *chains, stains and pains of retirement*. His approach was deemed relevant (despite its somewhat negative tenor) because the premise of this study was that retired home economists would be wrestling with life after university and their intense engagement with young professionals for so long. Although not designed for home economists specifically, Bingham's (2016) approach is used in this study as a way to explore their anticipated existential angst, defined as being anxious about one's existence (McGregor, 2015).

Bingham (2016) argued that *chains* limit or hold people back during their retirement. Chains can confine, bind and restrain people, and include fear, people, obligations, activities, places and possessions. *Stains* are carried forward from work into retirement, and can tint, inhibit or discolour relationships, and present uncomfortable challenges. Stains include sadness, resentment, bitterness, anger, anxiety and guilt. Retirement *pains* come about as a result of changes experienced when in

the new state of retirement. If something is painful, it is strongly unpleasant, troubling, distressful, even annoying or tedious. Examples of retirement pains include less money, too much time, the loss of work-related camaraderie, and struggles with spousal or partner reconnections (see Figure 1, developed for this study using Bingham's terminology and a thesaurus).

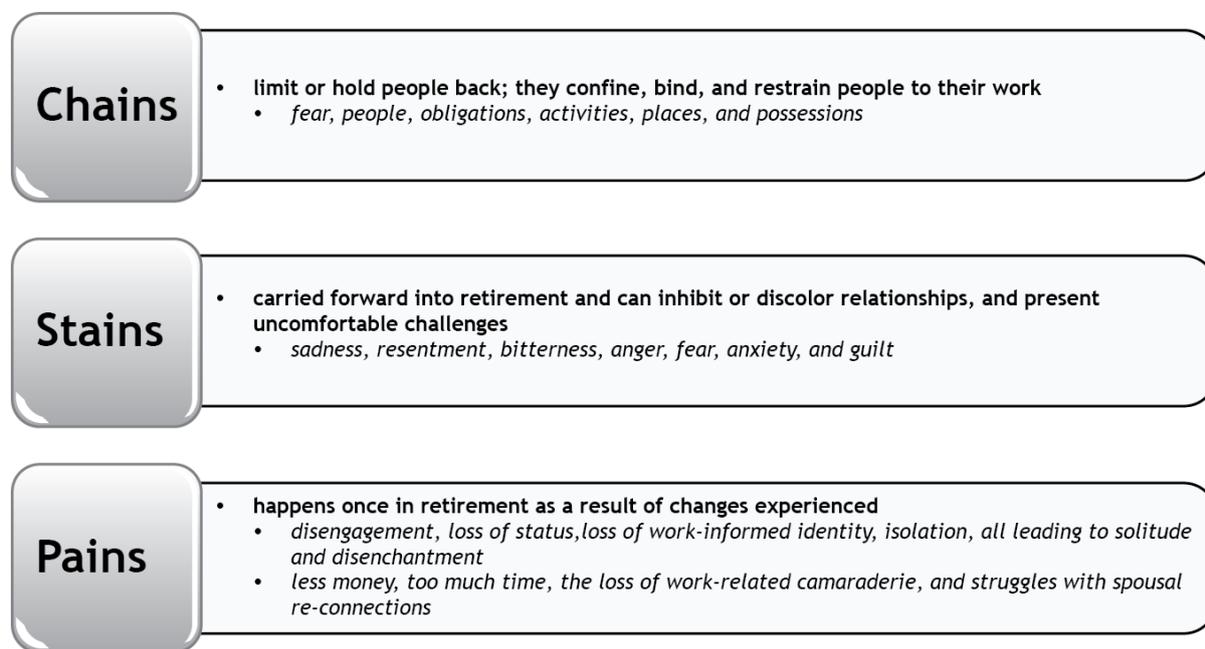


Figure 1 Bingham's (2016) chains, stains and pains conceptualization of retirement

Bingham (2016) assumed that being aware of the chains, stains and pains of retirement may help retirees make the most of their life after work by mitigating constraints, negative emotions and jarring changes. In order to deal with any possible existential angst in retirement, newly-retired university professors have to find ways to create meaning, discover new opportunities, make different contributions, and seek new measures of achievement and satisfaction once familiar signposts are removed (MacLachlan, 2016). Loureiro et al. (2016) agreed that retirement is a transition phase during which people have perceptions of gains and losses, and have to relearn and readapt. Losses include disengagement, loss of status, loss of work-informed identity, and isolation—all leading to solitude and disenchantment. Gains include improved quality of life and a sense of wellbeing, personal growth, more time with and for family and friends, and more leisure time as well as more focused time for research and scholarship (if desired), and community and cultural involvement.

Saeed and Sarwar (2016) identified nine combined factors that explained 65% of the variation of social issues experienced by retired faculty members in their study: retirement roles, depression, financial worries, adjustments, expectations, and changes in life responsibilities. All retirees will experience new rhythms to their lives, and will have to adjust and adapt accordingly along several dimensions: individual, marital (relational), family and community (Loureiro et al., 2016). Retired home economics university professors may also have to adjust along the dimensions of professional and disciplinary contributions, and they may have to deal with emotions attached to no longer being engaged with socialising the next generation. This is the first study of its kind for the home economics profession and discipline.

Method

This study employed a descriptive research design, desirable when little is known about a phenomenon (Dudovskiy, 2016). The results and findings cannot be generalised beyond the particular study, but they can be used to profile participants *in* the study (Blaxter, 2013; Wiersma & Jurs, 2009), thereby enabling the researcher to *describe* the situation more completely, laying the groundwork for future studies (Fox & Bayat, 2007).

Sampling and data collection

This positivistic, qualitative study employed purposive sampling, which involves selecting people on purpose because they can best provide information to answer the research questions (Patton, 2002). Using a blind carbon copy (BCC) email, 12 international retired home economists (six countries on two continents) known to the researcher were approached with a study invitation. This email contained a Word document that included 14 questions. There were 10 career and retirement decision-related questions as well as three open-ended questions informed by Bingham's (2016) conceptualization of retirement. For Questions 11-13, respondents were asked, for each of chain, stain and pain, a similar question. For example, "Using Bingham's model, please identify any *chains* that you feel are holding you back during your retirement as they pertain to professional and disciplinary chains, if any." The instrument concluded with an open-ended question - "Feel free to add additional comments about the topic of the impact on the future of home economics of the retirement of the baby boomer generation of interdisciplinary-oriented university professors." The design of the data collection instrument respected the open-ended approach of descriptive research (Fawcett & Downs, 1986).

Data were collected in June 2017. Invitees were given two weeks to return the completed WORD document by email. A reminder BCC email was sent after one week. This approach generated four completed surveys, with two invitees saying they would send their responses within the allotted time (one did). At the end of the two-week wait period, a total of five responses had been received. At that time, a BCC *thank you message* was sent. Upon receiving this note, two other invitees asked if they could complete the survey, explaining that they had been unavailable when the original invitation arrived (one did). Three of the retired invitees (all with active email accounts) never acknowledged receipt of the invitation (Canada, United States and Europe). One invitee opted out because she did not think she was retired yet.

In "purposive sampling the criterion [for response rates] is whether the realised net sample fulfills the researcher's objectives" (Schwarz, 2013, p.4). The final 50% response rate ($N = 6$) is considered good for email surveys (Sheehan, 2001; University of Texas at Austin, ca. 2010) and believed to be adequate to solicit data to address the research questions.

Data analysis

To deal with validity (i.e., not going beyond actual responses during data analysis due to the researcher's familiarity with the respondents), each respondent received a pseudonym before data analysis. On a whimsical note, each pseudonym echoed the name of a founding and/or influential home economist known around the world: *Ellen Swallow Richards*, *Marjorie Brown*, *Alice Ravenhill*, *Doris Badir*, *Dorothy Mitstifer*, and *Beatrice (Bea) Paolucci*. Merging the respondents' typed responses into one document yielded a 13-page, single-spaced, and typed dataset.

First, the data were analyzed using descriptive statistics (frequencies, means and range), mainly Questions 1-10, presented as *General findings*. Then, responses to the three questions related to Bingham's (2016) conceptualization of retirement were amalgamated and presented as such, using direct quotations as evidence of findings. The same approach was used for Question 14, additional comments. These were presented as *Findings Related to Bingham's Conceptualization of Retirement*.

This procedure was followed with a thematic analysis of the amalgamated data from Questions 1-14, presented as *Findings from the Thematic Analysis*. One person (the author) repeatedly coded the data, achieving 90% intracoder reliability (Krippendorff, 1980). In this small sample, evidence of a theme included (a) a recurring idea that threaded its way through the data (albeit using different words), (b) the same words, phrases or sentences repeated across the data, (c) a few incidences occurring very forcefully, (d) a topic raised or discussed frequently, or (e) a large number of people expressing the same idea (Owen, 1984; Krueger, 1998; Morgan, 1998). This thematic evidence took the manifest form of direct respondents' quotes along with the researcher's interpretation of latent meanings (Aronson, 1994).

General findings

Table 1 reflects questions 2-9, focused on age at the time of the study, career profile, and retirement decisions (reported using descriptive statistics). This is followed with the findings for Question 10 pertaining to why they retired when and how they did.

Table 1 Responses to Questions 2 through 9: Age, Career Profile and Retirement Decisions

Numbered questions	Responses (n = 6)	
	Average	Range
2. What is your age?	69 years	62-75 years
3. How many years did you work in <i>higher education</i> (college, university, technical school) teaching home economics?	32 years	17-40 years
	Answer	n
4. Did you hold administrative positions in home economics (or related) units?	Yes	4
	No	1
	Unanswered	1
5. Did any of your courses pertain to (or contain sections on) the history and the philosophy of the profession/discipline?	Yes	6
	No	0
6. Would you say you personally employed and also taught students an interdisciplinary, integrative perspective?	Yes	4
	To some extent	2
	No	0
7. In what year did you retire (year and month)?	2009	1
	2012	2
	2014	1
	2016	2
8. Was your retirement decision voluntary or involuntary?	Voluntary	6
	Involuntary	0
9. Did you take an early, planned, or delayed retirement?	Early	0
	Planned	4
	Delayed	2

Final sample

The final sample frame comprised six female respondents from four countries (withheld to protect respondents' identities), with four from North America and two from Europe. Their average age was 69, ranging from 62 to 75. Respondents retired on average at age 64, meaning most had been retired about five years.

Career profile

Respondents had been home economics professors for an average of 32 years, ranging from 17-40. Most ($n = 4$) had both administrative and teaching experience (including Interim Chair, Director, and Dean). Virtually all ($n = 4$) respondents said they personally employed and taught from an interdisciplinary, integrated perspective, with two saying slightly or to some extent. The issue of interdisciplinarity came up several times in their answers to Questions 11-14, to be discussed. All (100%) respondents said they had taught courses about the philosophy and history of the profession/discipline, but the topic received nominal mention in the open-ended questions.

Retirement decision

Their average age at retirement was 64, ranging from 59-69. All (100%) respondents retired voluntarily, with most ($n = 4$) retiring when planned. Two delayed their retirement. No one took early retirement. Virtually all ($n = 5$) respondents had retired within the last five years, with half retiring in the spring/summer and two in the fall semester (one person did not complete this question). In

most instances, university professors are hired in the spring/summer semesters and retire the same month or semester they were hired.

Regarding fall retirements, Marjorie explained that she stayed until September so she could “finish work” with her students. Ellen explained that she retired in December upon nearing completion of her research project about the history of home economics. After serving in an administrative position for 15 years, she had made the decision to “retool’ to acquire information and strategies for doing historical research [which she conducted] during the next four years, prior to retirement [and continued to do so] for the first two years of retirement.”

Reasons for retirement

Regarding Question 10, respondents shared several common reasons for retiring when and how they did (see Table 2). Most respondents provided multiple reasons for retiring, with one respondent (Bea) giving a single reason, a state-offered retirement option. Ellen alone expressed a control sentiment. “Choosing this time to retire allowed me to be in control of these life transitions.” Marjorie said she “felt that it was the right time to go.” Ellen said “philosophically, I [was at] a good age at which to retire.” She was the only person who explicitly said she retired because she “had a comfortable retirement income.” No one else commented on their financial readiness for retirement. However, when discussing pains (changes) in retirement, Dorothy indicated that “I have less money and live on a tight budget.” Marjorie mentioned that she would like to “earn a little more money for myself [now that I am retired].”

Table 2 Reasons Given for Retiring Now

Reasons for retiring now	Responses
Research and Teaching	4
<ul style="list-style-type: none"> • no more research to do • wanted time to do research • teaching secondment was over • wanted to teach part-time in retirement so as to retain access to academic environment for research support 	
Younger generation	3
<ul style="list-style-type: none"> • let the younger generation take over • make room for other academics in the pipeline • provide support for colleagues who are not retired 	
Be with husband (also retired), family, and friends	3
Opportunity to leave voluntarily	2
<ul style="list-style-type: none"> • state-wide special 5-year retirement plan option • chance to take Voluntary Redundancy (reduced salary followed with pension) 	
Health	2
<ul style="list-style-type: none"> • retired because she was healthy • had health issues 	
Take control of these life transitions	1
Could financially afford to retire	1

Two respondents took advantage of a system-offered retirement option. Bea clarified that “a special 5-year retirement plan was offered to all in the state [university] system and I took it.” Marjorie explained that she retired when she did “because there was an opportunity for voluntary redundancy (VR) which gave me a bonus of $\frac{3}{4}$ my annual salary, plus I could claim my pension and lump sum on retirement.”

The three most common reasons for retiring pertained to (a) research and teaching, (b) making room for the next generation, and (c) having time with family and friends, especially with husbands who were already retired (see Table 2). Regarding research and teaching, Alice said her “research projects had come to an end.” In contrast, Ellen looked at retirement as a time to do more research. “I wanted to do historical research in home economics/family and consumer sciences/human ecology at the

'end' of my career." Marjorie's exit route respected her "commitment and desire to still have access to the academic environment for ... what I planned to do next." This included writing a book.

Three respondents said they left higher education so the younger generation could take over or be supported. Alice expressly said it was "time for younger colleagues to take over." Ellen commented that "leaving a position leaves an opening for other individuals in the academic pipeline." From another perspective, Marjorie retired in such a way that she would still "have access to the academic environment for future support to my colleagues." Two retired for health reasons. Ellen retired because she "was healthy" and Dorothy retired because she "was having health issues."

Findings related to Bingham's Conceptualization of Retirement

The answers to the three questions related to Bingham's (2016) conceptualization of retirement are reported in this section, followed with the open-ended question. This is followed with the findings from a thematic analysis of the amalgamated data set. As a side note, those who held administrative positions during their careers tendered the longest answers to the questions about chains, stains and pains.

Chains in Home Economics retirement

As a reminder, Bingham (2016) proposed that chains limit or hold people back during their retirement. Two respondents said they were not experiencing chains. Alice said she could "not think of any chains" holding her back in retirement. Bea did not identify any chains holding her back *in* retirement but realised she *had* held herself back while working and "regretted not taking more risks during my career" (e.g., administrative positions, travel opportunities for research).

Two respondents identified obligations to the profession or to home economics colleagues as chains in their retirement. Marjorie said she felt an obligation to "my current colleagues as no-one will be reemployed to take our places and I do not wish a very successful course to fold. However, I do not feel that it is holding me back or confining me. I will admit however too much soul searching before I made the [retirement] decision." Doris clearly said "I feel some obligations to the profession. [...] Where I live there are few other home ec professionals at my level. I have a colleague with whom I work very closely, and if I did not participate to the extent that I am participating, some of the programs that we are involved in would not continue."

From a different perspective, Dorothy said her past experiences with fellow home economists were holding her back from joining associations in retirement. "I never got connected to the professional Association because at conferences I always find myself alone if I don't go with a friend. When you travel with Home Economists from your Country to international conferences and you are ignored because you are not part of the leadership or circle group you learn quickly to find other areas of interest. I find on both continents most leaders mostly pre-boomers and some boomers form a circle of groups that it is hard to penetrate... Based on the above I feel no chain to the organisation." Conversely, Ellen did not see these activities as chains in retirement. She said, "the obligations I had to organisations related to family and consumer sciences were of my own choosing." She still belongs to her national association.

Stains in Home Economics retirement

Bingham (2016) suggested that stains are carried forward from work into retirement and can tint, inhibit or discolour relationships and present uncomfortable challenges. Two respondents said they were not experiencing stains in retirement. To illustrate, Dorothy said "I am not bitter, angry or sad about it, therefore I have no stains. I have packaged the good skills and talents as a Home Economics and Family Studies Teacher into a Business."

The rest expressed issues that were staining and discolouring their retirement. Doris expressed futility or perhaps being put upon when she said "I feel like I have been holding the fort, so to speak, for home economics, with a couple of colleagues." The idiom 'holding down the fort' means taking care of something until someone comes back, assuming responsibility so as to maintain a secure position. Problems arise when people do not come back. Alice expressed "sadness regarding the development of the Department which was fused with Sportscience a couple of years after I left. Focus now very different than a human ecological one. Now on nutrition and sport performance. [I also feel]

resentment about how some conflicts between colleagues were settled over the years.” These emotions were still lingering into her retirement.

Ellen expressed regret, resentment, sadness and anxiety about a range of issues. “My major regret is that I did not begin advocating increased space and facilities for the College early in my appointment and was unable to move this to a priority in the campus plan. I feel some resentment toward the campus administration in place at the time and sadness that I did not aggressively push this issue. In the context of the broader profession and specifically AAFCS, I have some anxiety about the Family and Consumer Sciences Body of Knowledge statements and when and how it would be appropriate to explore that conceptual framework as to current and future thinking and practice. This process should involve the philosophers of the profession as well as administrators and practitioners. Right now, there are not many philosophers in our ranks.”

Bea identified several competing stains or challenges. “The first year after retirement I was [still] wrapping things up including a SKYPE doctoral defense from another country and serving on university committees/institutes... There is occasional boredom [which] I think it is a normal part of retirement from an active, engaged career and choices to be made about what paths to choose going forward and whether this hybrid type of relationship I have with my former employer is the best way to continue.” On a more positive note, Bea said she is still giving “guest lectures at my home university and others. What is gratifying is picking and choosing the relationships to continue which in my case was a response to ‘we really need you’.” To counter the negativity of the stain concept in retirement, Ellen asked “Why not also consider the ‘gains’ carried into retirement?”

Pains in Home Economics retirement

Pains result from changes experienced *after* entering retirement (Bingham, 2016). All respondents identified pains in retirement. Bea expressed positive and negative changes. “I still get identified as a professor in several things that I do ... so the status continues, [but I] miss the structure and schedule of classes, on the other hand, like the freedom from grading and being able to travel.” Marjorie also commented on status. “I suppose I still like my status as visiting lecturer [and I] am developing a new identity for myself as a foodie/consultant/writer. This links in with ideally liking to ... retain status and identity.”

Like Bea, Dorothy expressed pros and cons to the changes she was experiencing in retirement. “I am still engaged with my department by teaching once [in] a while as a guest speaker. Go to lunch with friends but you feel the loss of status at certain circles. My relationship with my spouse has improved. Even though I have a lot of time and I am relaxed, I have less money and live on a tight budget... I don’t feel like going to conferences.”

Ellen also commented on her spouse, conferences and finances, but from a different perspective than Dorothy. Ellen said “My spouse is terrific... He attends some of the professional meetings with me and is supportive of the financial contributions we make to the Association as well as supporting various major gifts we have made to the universities where I earned my degrees or was employed.” Marjorie said her husband “is trying to organise my [time]. I am resisting... On the whole, it is working well and we are retaining our own identities and interests and he has always been very supportive of anything that I do.”

In line with the basic premise of this study, Doris said it pained her when she ran “into old home economists who complain at length that the new grads are not disciplined and have no knowledge. I feel these old home economists are very old-fashioned (they have been the ones who stopped at their bachelor’s degrees, most likely completed in the 60s and 70s. If you think the current crop of professionals is narrow-minded, you might talk to some of these women). They tend to be instrumental and knowledge-oriented, and they do not understand that home economics has changed.”

Ellen said “the greatest pain I have experienced recently is the death of people who were my mentors and colleagues. We shared experiences and commitments to our profession, and they often paved the way for my professional growth and achievements.” As with the stain concept, Ellen rejected the concept of pain in retirement. She said, “I do not feel disengaged from my profession. I miss the regular interaction with colleagues since moving to another state; however, I attend the meetings of the state affiliate of AAFCS here and have attended all the annual AAFCS conferences since my

retirement. I have had publications in [two FCS journals] since retiring. I have had more time to do the research and fine-tune those manuscripts, and most of the time I've had a co-author so I am still connected to colleagues and former students."

Like Ellen, Alice said she did not feel "pain but the opposite; how relevant the issues we worked with were... The necessity of an interdisciplinary approach in understanding these issues [is] now sort of rediscovered and recognized in other fields. That is ok. I feel proud over being involved a long time ago [with] such approaches in home economics."

Additional comments

Question 14 gave respondents a chance to add additional comments about the impact of the retirement of interdisciplinary-oriented university professors on the future of home economics. Five respondents answered this question, with Alice saying "I don't really know [what] you mean." Ellen's answer was "I have interspersed comments in previous sections that relate to this item. That's probably sufficient."

Marjorie still believed in the profession, saying "I feel that I have gained so much from my interdisciplinary profession and still wish to give something back." In an interesting twist, despite saying she "feels some obligation to the profession [and was] holding the fort [to keep her programs alive]," Doris said, "there are many more exciting things for women to do today than go into home economics."

Despite her belief in the profession, Marjorie expressed concerns about its future. "I am worried about the future of home economics as ... an interdisciplinary area... We need to retain visibility and not just fade away... I feel that whenever possible we still need to be involved in being influencers." She commented that the baby boomer professors who were "brought up in the [interdisciplinary] tradition have been fragmented by the increasing demands of the academic cross-cutting and cutting of courses in many institutions." To offset this fragmentation, she advocated for "some form of mentoring network... possibly under the aegis of the International Federation for Home Economics (IFHE)." She also aspired to write a history of home economics in her country to aid in "reflecting on the changes but also considering what future for the subject field." Dorothy was more philosophical in her response, musing that "change is the only constant. Therefore with the boomers retiring the nature of Home economics too will change to meet current situation and needs which is different from the boomers and pre boomers time... I am sure all will be well if we plan well."

Findings from thematic analysis

An analysis of the amalgamated answers to Questions 1-14 (see previous section) revealed six themes related to the: premise of the study, future of the profession, role of interdisciplinarity, history and philosophy of the profession, academic engagement, and value to home economics of Bingham's (2016) conceptualization of retirement.

Premise of the study

Half of the respondents answered the questions in the survey without challenging the premise of the study (i.e., the threat to the home economics profession caused by mass retirement of professors who teach from an interdisciplinary perspective). However, the other half commented strongly and directly about the study's premise. Ellen agreed that "it is a spot-on statement about the demographic and philosophical transition ... of home economics/family and consumer sciences." Marjorie also embraced the study's premise when she acknowledged the peril created for the profession by the fragmentation of interdisciplinary-oriented programs.

Doris disagreed with part of the premise. "I do not agree that older home economists are interdisciplinary-oriented... Old home economists are very old-fashioned [and narrowminded] ... [Like them] I took my bachelor's degree in home economics in 1968 [but unlike them I did] study philosophy or history [in] my graduate degrees completed in 1991 and 2003." With her interdisciplinary and philosophical background, Doris lamented the future of her university's program, which she and a colleague are sustaining by working well into retirement with sessional teaching (five years and counting). If they personally withdraw from the program, the other part of the study's premise holds—there will be a threat to home economics caused by the retirement of professors who teach from an interdisciplinary perspective.

Future of the profession

A concern for the future of the profession was polarised. Respondents expressed hope and confidence in the future of the profession while acknowledging the harm of fragmentation and specialisation, and the lack of philosophical strength. Dorothy optimistically forecasted that “with the boomers retiring the nature of Home economics too will change to meet current situation and needs which is different from the boomers and pre boomers time... [All] will be well if we plan well.”

As did Dorothy, Ellen expressed hope for the future of the profession, saying “I hear about professors who continue to emphasize the integrative focus of human ecology and that their Millennial students ‘get it’ (they understand the connectivity and interdependent relationship)... It is inevitable that changes will be made, but I have confidence that there are enough current people teaching and mentoring students, and enough students who understand the philosophical foundation of the profession that it will endure.” Dorothy, however, cautioned that “we should include the [next generation] in identifying the needs and adapting the profession to meet their needs... We have to try to avoid imposing our ideas and values on [them and instead] guide them and help them to make right choices to create a new and strong Home Economics profession.”

Ellen spoke of “some anxiety about the Family and Consumer Sciences Body of Knowledge statements.” Despite thinking it “would be appropriate to explore that conceptual framework as to current and future thinking and practice,” she acknowledged that “right now, there are not many philosophers in our ranks.” Marjorie said “I am worried about the future of home economics as... an interdisciplinary area [which has] been fragmented by the increasing demands of the academic cross-cutting and cutting of courses in many institutions.” Speaking about her own context, Alice said she felt “proud over being involved [with] interdisciplinary approaches in home economics” but at the same time expressed “sadness regarding the development of the Department [which used to embrace] a human ecological [focus].” Marjorie valued her interdisciplinary home economics background, and urged others to embrace the idea that “we need to retain visibility and not just fade away.”

Interdisciplinarity

Question 6 specifically asked respondents if they embraced and taught from an interdisciplinary, integrative perspective. Most answered yes (see Table 1) with the topic threaded throughout the data set. Alice recognised that “the necessity of an interdisciplinary approach in understanding these issues [has] now sort of [been] rediscovered and recognized in other fields. That is ok.” Ellen commented on this phenomenon as well. “There is a major push in institutions of higher education in the United States to do interdisciplinary work... Like so many of the historical concepts in home economics, other disciplines are ‘catching on’ and thinking these ideas originated in their field—when, in fact, home economics had this perspective all along.”

Marjorie said that despite having “gained so much from my interdisciplinary profession [I am] worried about the future of home economics as an interdisciplinary area.” Dorothy pushed the discussion in a new direction. “Instead of teaching interdisciplinary and integration, let us also teach interconnectedness of individuals and how to help the individuals to develop peace within so they can project it to their environment.”

History and philosophy of the profession and discipline

Question 5 asked respondents if any of their courses pertained to the history and philosophy of the profession. All said yes (see Table 1), but two discussed this topic in other questions, each from a different perspective. Dorothy said “I spent both my education and professional life as a Home Economist on two continents. I enjoyed teaching the mission the philosophy and interdisciplinary and integration of Home Economics. And [I] try to help my students to understand the mission and its application in family relationships and planning programs.”

From a less positive stance, Doris said “I took my bachelor’s degree in home economics in 1968 and I did not study any philosophy or history until my graduate degrees completed in 1991 and 2003.” With this foundational background under her belt, Doris now acknowledges “obligations to the profession” and is still teaching home economics part-time in retirement, “holding the fort, so to speak.” The author can personally attest to the strong philosophical and historical foundations of these programs, made possible by Doris and her colleague.

Ongoing academic engagement

Despite retiring on average five years ago, virtually all respondents were still actively engaged in sessional teaching, guest lectures and the like. Doris retired in June 2012 but is “still employed sessionally teaching [1-2 courses per year] in a home economics graduate program.” Bea (retired 2016) said she is “still involved [with] student interviews, awards, and research. I was on campus 2 days last week for meetings, also give guest lectures at my home university and others.” Marjorie (retired 2016) said she “decided to still carry on part-time teaching but not manage the masters course.” Dorothy (retired 2014) said she is “still engaged with my department by teaching once in a while as a guest speaker.”

Conceptualization of retirement for home economics

This study employed Bingham’s (2016) chain, stain and pain conceptualization of retirement (see Figure 1). Although most respondents did not take issue with this framing of retirement, both Marjorie and Ellen had concerns with the model’s negativity. Marjorie said “it is a very negative model—but usefully thought-provoking.” Ellen exclaimed that “I have a hard time relating to Bingham’s model—it couches retirement [in] totally negative terms. Does anything in his model address the positive benefits that come with retirement?” She questioned the validity of using Bingham’s (2016) model to understand home economists in retirement. “I disagree with the nearly total negative interpretation of the effects of retirement that are the essence of Bingham’s conceptualization... I’m surprised that you picked a model (Bingham’s paradigm) that is so negative... My responses to the discussion questions are probably weighted 95% positive and 5% negative, hardly consistent with his paradigm.” Other respondents may have had subliminal reactions to its negativity. Dorothy said, “I am not bitter, angry or sad about [retiring].” When answering the question about any pains experienced in retirement due to changes, Alice said, “This is not a pain but the opposite... I feel proud [to be] in home economics.”

Discussion

The discussion of the findings begins with a comparison of home economics retirees (see Table 2) relative to the general retirement literature. This is followed with a critique of the usefulness of using Bingham’s (2016) conceptualization of retirement to understand home economists in retirement, drawing on the thematic analysis. Study limitations are acknowledged followed with suggestions for future research.

Home Economics retirement profile compared to the literature

This study’s profile of academic home economists in retirement basically matched that of other academics. Regardless of the country in question, after working at university for an average of 32 years, respondents in this study primarily took voluntary, planned retirement at age 64. Canadian and American professors are expected to work beyond age 65 (MacLachlan, 2016; TIAA, 2014), and all four respondents from those countries fit that profile. No one took early retirement and no one left involuntarily. The two respondents who took advantage of a system-offer to retire sooner than expected framed their experience as a planned retirement. The overall tenor of the data set was positive, possibly explained by the voluntary retirement status of all respondents. Those who retire of their own volition experience more satisfaction with their decision (Floyd et al., 1992).

Three respondents indicated they were not done yet, and wanted to continue to influence the profession (ACE-Sloan Projects on Faculty Career Flexibility, 2010; Allison et al., 2016; Maril, 2014). To illustrate, Bea said, “I’ve chosen to stay active with colleagues around the world (most of whom are still employed).” No one said they retired because they did not want to teach, conduct research, or engage in scholarship anymore (McMorrow & Baldwin, 1991). Also, no one said they left because they felt unappreciated, were dissatisfied with work, or felt burnt out (Bland et al., 2004; Maril, 2014). No one said they held onto their position because it defined them or was a key part of their identity (Allison et al., 2016; TIAA, 2014). Instead, several respondents noted they were creating new identities, grounded in their home economics background (Allison et al., 2016; Wharton University of Pennsylvania, 2016).

Compared to the reasons *not* given for retirement, three of the stated reasons *for* retirement (see Table 2) paralleled other factors reflected in the literature, namely to a) wrap up or continue research and teaching, b) have more time with family (especially retired husbands) and friends, and c) make room for the next generation (Allison et al., 2016).

One person retired because of health issues. Another said she retired because she could afford to (Allison et al., 2016; McMorrow & Baldwin, 1991). Two respondents commented on the importance of retaining status as an academic. Two others spoke confidently about home economics retirees' ability to adapt and move forward (Allison et al., 2016; Friedman & Cullinane, 2013).

Given that virtually all of the respondents were still academically active (teaching, research, guest lectures, book writing), it seems logical to assume they were keen to continue with their 'life of the mind' (Working Group on Faculty Retirement, 2012). Ellen wrote a book, Marjorie aspires to write a book, and Bea continues to be involved with textbook writing. Doris is still teaching, which involves ongoing cerebral activity along many dimensions. Dorothy is using her home economics background in a new business, again an activity replete with intellectual engagement as well as business acumen (Allison et al., 2016).

It seems the home economists in this study loved their work but also valued the benefits of retirement (Allison et al., 2016; Loureiro et al., 2016). As Ellen put it, "My experience has been 95% positive. Retirement has been liberating for me, in part, because I could accomplish some of the professional goals I had not achieved while employed. In other occupations, people may be cut off from their workplace, but in a professional career setting such as academia and a career (professor/teacher) that encourages lifelong learning and service, there are many opportunities to continue to contribute and to grow."

Chains, Stains and Pains in Home Economics Retirement

By applying Bingham's (2016) conceptualization of retirement to this data set, an inaugural profile emerged of the chains, stains and pains of home economists in retirement. Only one person identified a chain that was holding her back—she was still teaching part-time in retirement because of a sense of obligation to the profession. Conversely, another person said she felt obligated to the profession but this was not holding her back in retirement. A third person intimated she *should* feel some obligation to the profession but did not. Now that she was retired, she did *not* feel chained to professional associations and did not want to attend their conferences. On the other hand, a fourth person said she valued her professional connections via associations and conferences while retired.

Respondents identified stains and pains in their retirement more so than chains. Stains can taint retirement. Collectively, the respondents expressed sadness, resentment, guilt, anxiety, worry, and doubt. These emotions were attached to such issues as (a) giving their life to university programs that will die without them, (b) not doing enough while employed to protect or prevent program loss and closures, (c) angsting over the lack of philosophical practitioners, and (d) worrying over the hybrid relationship they now have with their program and institution (a sort of transitional retirement limbo).

Collectively, respondents experienced an array of painful changes in retirement, including the (a) loss of structure and schedules, (b) potential changes to status and identity, (c) loss of regular collegial interaction, and (d) death of mentors and colleagues. One respondent said it pained her to (e) encounter the lingering cadre of "old home economists" who are wrongly judging the current generation. Overall, Bingham's (2016) conceptualization of retirement was useful for engendering insights from the study's participants. They experienced an array of challenging emotions (stains) and transitional pains, but to a lesser extent felt restrained in retirement (chains).

Unique home economics profile

As noted earlier, home economics lacks an understanding of the evolution of its academic profession in a long time perspective. This study revealed several unique characteristics of home economics academics in retirement, compared to the general retirement literature. Their issues included (a) the loss of university programs that socialise the next generation, (b) the lack of philosophers in our academic and administrative ranks, (c) a concern for the future of the profession due to fragmentation and specialisation, and (d) a strong sense of obligation to the discipline and profession. Respondents also commented on (e) the resurgence and rediscovery of interdisciplinarity by other

disciplines, something home economics has been doing for over a century. They saw this as a good thing.

No existential angst

One particular theme, expressed strongly by two respondents (Owen, 1984), opens the door for a conversation about understanding home economists in retirement. Both Marjorie and Ellen criticised Bingham's (2016) approach to retirement as far too negative. Although judged to be thought-provoking, they felt his model did not address the positive benefits of retirement. As a caveat, his conceptualisation was chosen because it mirrored the premise of this study—committed home economists who had given their life to an interdisciplinary profession would be deeply affected when they retired from active engagement, with fallout around their professional identity, sense of disciplinary contributions, and the future of the profession.

The two research questions reflected this premise or assumption. Question one focused on how they felt about retiring from a profession and a discipline they had contributed to for most of their lives. Question two asked what it meant to them that they would no longer be actively, formally, involved in socialising the next generation. Results (see Table 1) revealed that despite teaching home economics from an interdisciplinary and integrated perspective for an average of 32 years (including courses on the history and philosophy of the profession), virtually none ($n = 5$) of the respondents expressed qualms about retiring from their profession or being less involved in socialising the next generation (Doris was the exception). Yes, they experienced chains, strains and pains upon retiring, but the existential angst anticipated by the author did not materialise in this data set.

Most respondents answered the survey questions without challenging the study's clearly-stated assumption and premise, articulated at the beginning of the instrument: "The old guard of home economists (aged 55-77) were trained from an interdisciplinary, integrative perspective. They are now reaching retirement age *en masse* around the world, meaning the millennial generation will be socialised into the profession by people who are not home economists but are specialists instead. This study is about your opinions of the potential impact on the future of the profession and discipline of the retirement of interdisciplinary-oriented home economics university professors, yourself included."

The results suggest that most respondents totally enjoyed their careers and were equally enjoying retirement. Although several expressed concern for the future of the profession (due to fragmentation, specialisation, and philosophical lacuna), just as many (often the same people) envisioned hope and confidence for its future. They trusted those still in the academy to take care of the profession. With conviction, Ellen said, "I have confidence that there are enough current people teaching and mentoring students, and enough students who understand the philosophical foundation of the profession that it will endure." And to use her words again, Dorothy said "with the boomers retiring, the nature of Home economics too will change... [A]ll will be well if we plan well."

Limitations and recommended future research

If not for one respondent's very strong endorsement of the home economics dilemma driving this study, it would have been convenient to conclude that the author's underlying assumption was flawed. But Ellen, with 36 years experience as a home economics educator and administrator, affirmed that "I was intrigued by your introductory paragraph about the generation of professionals trained in the 'interdisciplinary, integrative perspective,' who are now retiring around the world. The current generation of students is being educated and encouraged in their identity as professionals—as 'specialists.' This is a spot-on statement about the demographic and philosophical transition (if not transformation) of home economics/family and consumer sciences." Accepting the study's premise as sound for now, the following suggestions for future research are tendered.

Upon reflection, the descriptive research design (email open-ended survey) may be problematic in its adequacy for generating the data needed to fully answer the research questions (Patton, 2002). The author is still convinced that some baby boomer retirees are experiencing existential angst. A follow-up study is recommended that employs a qualitative, interpretive research design. Focus groups or semi-structured interviews could be conducted using the same research questions. A thematic analysis could discern if similar issues and concerns arise, or if different information and insights emerge.

Another possibility is to have participants complete a diary or reflective journal for several years after entering retirement. Bea suggested a “follow up study in 5 years because the first year or two of retirement is all about adjusting and transitioning. Several of my friends have said they have nothing to do with their former employer/university after two years and don’t care to, not interested. Some drop it immediately.” Allison et al. (2016) concurred, noting that “there is a profound sense of completion in the act of leaving the field of play... There is no obligation for you to take up the bat again.”

Also, designers of future studies are encouraged to either (a) eschew Bingham’s (2016) negative-oriented approach to retirement, or (b) repeat it to see if others have the same push-back or ambivalence to its negativity. His model was useful for profiling home economists in retirement but resistance to its negativity was strong enough to warrant further examination. This study involved six purposively-selected respondents, reflecting a 50% response rate. Future efforts should have larger sample frames, and use purposive sampling combined with snowball sampling. In the latter, people already recruited suggest other people who are a good fit with the research question and so on until saturation. Despite achieving a 90% intracoder reliability coefficient, arranging for multiple coders would raise the possibility of more diverse interpretations of the results (Patton, 2002).

Finally, it was observed that those who held administrative positions during their careers tendered the longest answers to Questions 11-13 (i.e., chains, stains and pains). Future studies should focus on both administrators and regular faculty members and conduct comparative analyses. After all, administrators (Deans, Directors and Chairs) are in the political position to influence home economics and FCS programs in the future, so profiling their concerns seems prudent.

Conclusions

Although the retirement profile of the home economists in this study closely matched retirees in general, several unique features merit further examination, especially a concern for making room for the next generation juxtaposed against a sense of obligation to the profession and a concern for its future. The latter concern arises from the loss of programs, their fragmentation and specialisation, the lack of philosophical acumen, and the deaths of mentors and colleagues (and, by association, the loss of collective memory). Should researchers choose to engage with the home economics dilemma laid out in this study, they are encouraged to draw on conceptualisations or models of retirement that better balance the pros and cons. Ellen said it well: most home economists “are capable of redirecting their intellect and energies to other interests, pursuing current interests part-time, or moving and adjusting to new environments.”

Our reality is that an entire cohort of higher education home economics educators will be retiring over the next decade. This unprecedented exodus raises many concerns, with one being a reduction in the number of interdisciplinary, integrative generalists to socialise the next generation of practitioners. This inaugural study profiled a small sample of retired home economists from six countries on two continents, creating, for the first time, a home economist retirement profile. Per the constraints of a descriptive research design, these data describe only these six respondents. But, the study enabled the researcher to *describe* the situation more completely and lay the groundwork for future studies (Fox & Bayat, 2007). In the future, researchers could add questions focused on gaining context for each respondent. What portion of their career was spent as an administrator? How long had they been at their most recent university and was it a growing program or under threat? What legacy do they think they left personally?

Future proofing the profession (Pendergast, 2009) depends on gathering more data from retirees (Kuri, 2005). If other studies show that home economists leaving the professoriate do not have professional qualms about doing so, then assumptions may have to be redrawn about ‘the greying of home economics’ and its disciplinary impact. Maybe it is a time of opportunity instead of existential loss and dooms-day thinking. Dorothy’s words again ring true. She said that “with the boomers retiring the nature of Home economics too will change to meet [the] current situation and needs which is different from the boomers and pre boomers’ time... [A]ll will be well if we plan well.” Ellen, with 36 years experience in the academe, was hopeful as well. “It is inevitable that changes will be made, but I have confidence that ... the profession will endure.”

Biography

Sue L. T. McGregor (PhD, IPHE, and Professor Emerita) is a Canadian home economist (nearly 50 years) retired from Mount Saint Vincent University. She has a keen interest in home economics philosophy and leadership (along with consumer studies, transdisciplinarity, and research paradigms and methodologies). Sue is the recipient of Kappa Omicron Nu's (KON) Marjorie M. Brown Distinguished Professor Award (for home economics leadership), and is Docent in Home Economics at the University of Helsinki. With Donna Pendergast (Australia) and Kaija Turkki (Finland), she co-edited (2012) *The Next 100 years: Creating Home Economics Futures*. She published *Understanding and Evaluating Research* (SAGE) in 2018. Her home economics scholarship is at www.consultmgregor.com.

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INTERNATIONAL FEDERATION
FOR HOME ECONOMICS

REFEREED PAPER

Importance of home economics compared to other secondary school subjects: Australian parents' and young adults' views

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Abstract

The secondary school home economics subject provides life skills for students. Exploration of different stakeholders' opinions of this subject is important for identifying its status in schools. Accordingly, the present study examined young adults' and parents' opinions of secondary school home economics education. An online survey was administered to 1,086 Australian respondents drawn from a commercial research panel. The key questions included: 'How important is home economics compared to other secondary school subjects in the following years: Years 7-12?', and 'In general, how would you rate the importance of the following subjects in the middle years of secondary school?' The respondents were asked to rate 14 secondary school subjects including home economics. More than 50% of the respondents (53-60%) rated home economics as 'one of the most important subjects' or 'the most important subject' in years 7-10 and this was 45% in the case of years 11-12. Visual examination of respondents' ratings of the different subjects revealed that home economics was believed to be of similar importance to health, physical education, and digital technologies. These findings suggest that there is widespread support for home economics education among young adults and parents in Australia.

KEYWORDS: HOME ECONOMICS, SECONDARY SCHOOL, PARENTS, YOUNG ADULTS, AUSTRALIA

Introduction

Secondary school home economics was originally introduced with the aim of providing life skills for students (Pendergast, Garvis, & Kanasa, 2011; Pendergast, 2001b; Smith, Hall, & Jones, 2001). This subject was mainly targeted at girls, to prepare them for future roles in society as wives, mothers, and domestic workers (Benn, 2012; Caraher & McCloat, 2016; Pendergast, 2001b; Stage, 1997). However, since then the societal role of women has changed with more women taking up paid employment outside the home. Cooking practices have also changed, partly due to the introduction of processed foods by the manufacturing food industry (Jaffe & Gertler, 2006). Because of these changes in the domestic and paid employment roles of women, and in cooking practices, the use and relevance of home economics was questioned (Benn, 2012; Pendergast, Garvis, & Kanasa, 2013;

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Slater, 2013). Subsequently, home economics was pushed aside by subjects like computing and math, which were viewed by authorities and parents as more important for students' future career opportunities (Dewhurst & Pendergast, 2008; Pendergast, 2001a; Pendergast et al., 2011; Slater, 2013).

During the past decade, however, the widespread increase of food-related problems has initiated debates about the importance of home economics. In school settings home economics can play multiple roles to tackle the food-related problems in society. Firstly, in secondary schools home economics can enable students to gain knowledge and learn new skills that will help them in their future lives (Pendergast, 2008). Secondly, both theoretical and practical home economics lessons can be used as a platform to deal with everyday practicalities and basic human needs, for example through the acquisition of food preparation and budgeting skills. Finally, home economics can be a societal platform that facilitates discussions about community and environmental wellbeing as well as sustainability-related issues (Caraher & McCloat, 2016; Pendergast, 2008; Smith, 2009). Accordingly, many leading researchers in health and education have suggested that home economics should be reinstated in school curricula (Lichtenstein & Ludwig, 2010; Pendergast & Dewhurst, 2012; Slater, 2013).

This renaissance of home economics, particularly in the form of food education, has been observed in several educational settings across the world. For example, in 2015 the 'General Certificate of Secondary Education (GCSE) in Food Preparation and Nutrition' was introduced to secondary school students in England (Department for Education, 2015). In 2017 the 'Victorian Certificate of Education Food Studies' was provided for senior secondary school students (years 11 and 12) in Victoria, Australia (Victorian Curriculum and Assessment Authority, 2016), and in 2013 the revised Ontario Family Studies learning area was introduced in secondary schools in Canada (Ontario Ministry of Education, 2013). These, as well as other initiatives, have focused on the provision of a much broader understanding of food in addition to the domestic and health-related aspects of food taught in traditional home economics.

Parents and young adults can be considered as the direct beneficiaries of school home economics education. This subject has the potential to provide food knowledge and skills to young people. These include an understanding of healthy food options, development of meal preparation skills and food budgeting skills, and an understanding of social values related to food (Caraher & McCloat, 2016; Pendergast, 2008; Smith, 2009). These types of knowledge and skills are invaluable for the physical, mental, and social wellbeing of young people (Grundy & Henry, 1995; Smith, 2009) and assists parents to make their children informed food citizens (Turkki, 2005). Moreover, food knowledge and skills enables young people to create better home food environments and support their parents' food decisions (Moore, Asay, & Curry, 2006; Turkki, 2005).

Research related to young adults' and parents' opinions of school home economics education is sparse and the available literature suggests that these groups have mixed attitudes towards school home economics education (Lai-Yeung, 2015; Pendergast et al., 2011; Slater, 2013; Slater & Hinds, 2014). Moreover, no large-scale studies have been conducted in Australia to explore these two stakeholder groups' opinions of school home economics education. Therefore, this paper focused on exploring parents' and young adults' opinions of the importance of home economics compared to other subjects offered in Australian secondary schools.

Methodology

Design, sampling, and procedure

The study adopted a cross-sectional descriptive study design. A large-scale online survey was conducted to obtain young adults' and parents' practices and confidence related to food, and their views of secondary school food education. Recruitment was done via quota sampling across Australia by gender, age, and State or Territory of residence. The sample was drawn from a research panel managed by GMI Lightspeed. Three hundred and thirty-one respondents were young adults (between 18–30 years) and 755 were parents of young people aged 12–25 years. Potential respondents were sent an email with a link to the survey as well as a plain language statement which explained the purpose and conditions of the survey. Ethics approval for this study was granted by Deakin (name) University health ethics advisory group (HEAG H191, 2016).

Instrument

The questionnaire included mainly close-ended questions and a small number of open-ended questions. Additional details of the survey questions are reported in a previous paper by the authors (Nanayakkara et al., 2018). The present paper focuses on the following two questions.

Importance of home economics subject

Respondents were asked *How important is Home Economics compared to other school subjects in the following school years?* They were asked to give their response for each year of secondary school from Year 7 to Year 12. Four category Likert-type response scales were used (where 1 = the least important subject, 2 = one of the least important subjects, 3 = one of the most important subjects, and 4 = the most important subject). Respondents were then asked *In general, how would you rate the importance of the following subjects in the middle years of secondary school?* They were asked to rate 14 secondary school subjects (English, mathematics, science, history, geography, visual art, music, drama, health, physical education, home economics, textiles, digital technologies, languages other than English). Five-point scales anchored at either end by opposite terms were used (*not at all important* (coded as 1) to *very important* (coded as 5)).

Demographic and educational background

Respondents were asked *How old are you?* Responses were recorded as a continuous variable (age in years). Those who were over 30 years were asked *Are you a parent of a young person aged 12-25 years?* Those who answered *yes* were allowed to proceed to the next stage of the survey, resulting in a final sample comprised of young adults and parents of young people (referred to as 'parents' hereafter). Respondents were asked *Are you male or female?* (male coded as 1 and female coded as 2). The respondents were asked *Did you study home economics or a similar food-related subject (e.g., Food Technology) in secondary school?* A *yes/no* (coded as 1 and 2 respectively) response format was used. The *yes* group is referred to as FS and the *no* group referred to as NFS hereafter.

Administration

The questionnaire was pilot tested among nine young adults and parents. After minor adjustments, the final pilot-tested questionnaire was administered via GMI Lightspeed during late 2016 and early 2017. This work was supported by a small grant from the the Institute for Physical Activity and Nutrition, Deakin University.

Data analysis

The responses to the questions were analysed using IBM SPSS Version 24. Cross-tabulation (Chi-square) analyses were performed to examine bivariate associations between categorical variables (gender, age, and experience of learning food-related subjects in school) and the responses to the question about perceived importance of home economics. A *p* value of less than 0.01 was selected as the level of significance.

Multidimensional scaling (MDS) was performed to examine the perceived similarities of the 14 subjects (Pinkley, Gelfand, & Duan, 2005). MDS is a data reduction technique that helps to identify the ways variables are related to each other (Giguère, 2006). The respondents' ratings of the 14 subjects were analysed using the ALSCAL program for nonmetric MDS. Stress and R Square indices were used to determine the dimensionality of the MDS solution. When the number of dimensions was set as 2, a smaller stress value (Kruskal's stress = 0.059) and larger R Square value (RSQ = 0.985) were observed, which indicated a good fit of the MDS model to the ratings data (Pinkley et al., 2005). Each dimension of the map produced by the MDS analysis was visually examined for the clustering of school subjects (Masnick, Valenti, Cox, & Osman, 2010; Pinkley et al., 2005).

Results

Demographic characteristics of the participants

In total, 1086 respondents completed the survey. Seventy percent were parents of young people and 30% were young adults. The mean (SD) ages of the parents and young adults were 51 ± 10 years, and 25 ± 3 years respectively. Forty-five percent were male, and 55% were female. Forty-seven percent of respondents had studied home economics or a similar food-related subject in secondary school, and 53% had not studied these subjects in secondary school.

Importance of home economics compared to other secondary school subjects

More than 50% (53-60%) of participants rated home economics as 'one of the most important subjects' or 'the most important subject' in years 7, 8, 9 and 10. The perceived importance of home economics in years 11 and 12 was lower but still substantial (45-46%). Significantly more young adults than parents rated home economics as one of the most important subjects or the most important subject in years 11 and 12 (Table 1). There was no difference in responses between males and females or between those who had and hadn't studied home economics or a similar food-related subject in secondary school.

Table 1 Proportion of respondents who believe home economics is important compared to other secondary school subjects

	Total (%)	Proportion of young adults and parents		Chi sq	p
		Young adults (%)	Parents (%)		
n		331	755		
Year 7	53	51	54	0.539	0.463
Year 8	60	59	60	0.087	0.768
Year 9	60	63	59	1.913	0.167
Year 10	59	62	58	1.338	0.247
Year 11	46	53	44	7.262	0.007
Year 12	45	52	42	9.819	0.002
Proportion of females and males					
		Female (%)	Male (%)	Chi sq	p
n		506	580		
Year 7		49	56	5.969	0.015
Year 8		57	62	3.172	0.075
Year 9		56	63	5.944	0.015
Year 10		56	61	2.457	0.117
Year 11		44	48	2.256	0.133
Year 12		42	47	2.766	0.096
Proportion of those who have (FS) and haven't (NFS) studied a food-related subject at school					
		FS (%)	NFS (%)	Chi sq	p
n		510	576		
Year 7		55	51	1.677	0.195
Year 8		63	57	3.712	0.054
Year 9		61	59	0.803	0.37
Year 10		58	60	0.898	0.343
Year 11		46	47	0.347	0.556
Year 12		44	46	0.163	0.686

Respondents' perceptions of the importance of different secondary school subjects (MDS)

The MDS map (Figure 1) summarises the respondents' perceptions of the different subjects. Inspection of Figure 1 shows that the subjects clustered into three groups which we have provisionally named: Job skills (science, mathematics, and English), life skills (health, digital technologies, physical education, and home economics) and self-expression (visual art, music, and drama) subjects. Furthermore, this map suggests that the respondents viewed home economics as of similar importance to physical education, digital technologies, and health. Similar patterns were observed when ALSCAL was conducted on the data sets from young adults and parents, males and females, and, FS and NFS (data not shown).

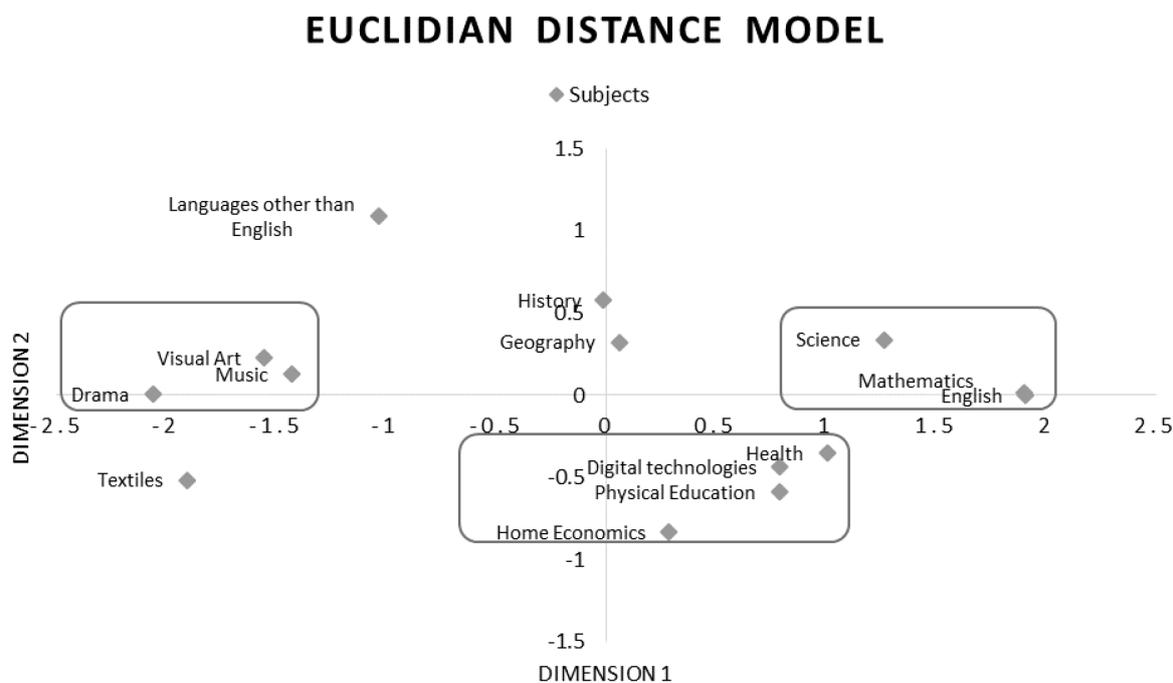


Figure 1 MDS map of respondents' ratings of 14 secondary school subjects

Discussion

The results showed that most respondents valued secondary school home economics highly. Moreover, they considered home economics to be as important as physical education, digital technologies, and health. The present study is unique in that it examined a large group of contemporary Australian parents' and young adults' views of home economics compared to other secondary school subjects.

The respondents' positive views of secondary school home economics may in part be related to the general decline of food-related skills in society (Bava, Jaeger, & Park, 2008; Caraher, Dixon, Lang, & Carr-Hill, 1999; Soliah, Walter, & Jones, 2012). This could have triggered the respondents to realise the importance of secondary school home economics. Previous studies showed that middle school students (Booth, 2011), and university students (Slater & Hinds, 2014) viewed home economics as a subject that teaches important life skills. Furthermore, previous studies that have explored lay people's and parents' opinions of food skills and school education suggest that home economics is seen as a conduit for the provision of life skills (Lai-Yeung, 2015; Pendergast et al., 2011).

The MDS findings suggest that lay people distinguish between secondary subjects along at least two dimensions, not one. That is, there are different kinds of subject importance perceived by parents and young adults, including job skills, life skills, and self-expression. All three types are important to parents and young adults, and, therefore, deserve thoughtful consideration in secondary school curricula. Our respondents rated home economics as similar in importance to digital technologies, health, and physical education. This is a novel and interesting finding that contrasts with the marginal status of home economics in many secondary schools (Colley, Comber, & Hargreaves, 1994; Pendergast, 2002; Slater, 2013). The teaching of home economics faces many challenges including

lack of trained staff, lack of time provision in school timetables, and inadequate financial and technical resources. Some of these challenges have been observed in Australia (Grundy & Henry, 1995; Pendergast et al., 2011; Ronto, Ball, Pendergast, & Harris, 2017a, 2017b; Ronto, Ball, Pendergast, & Harris, 2016). Our findings suggest that parents' and young people's expectations of home economics may be higher than those of education authorities, at least in Australia.

There was a noticeable difference in perceptions of younger compared to older respondents. More young adults saw home economics as one of the most important or the most important subject in years 11 and 12 compared to parents. In contrast, gender and previous home economics learning at school were not associated with the subject's perceived importance. Early studies of students' secondary school subject preferences found that home economics was preferred by female students compared to male students (Harvey, 1984; Lightbody, Siann, Stocks, & Walsh, 1996). Traditionally, home economics was stereotyped as a 'female subject' and more females took this subject in secondary school (Benn, 2012; Harvey, 1984; Lightbody et al., 1996). In the present study, there were no differences between the gendered perceived importance of home economics. This suggests that contemporary males and females value home economics equally. This is a novel finding that is consistent with the notion of importance of gender balance in the improvement of school home economics education (Azubuike, 2012; Lichtenstein & Ludwig, 2010; Pendergast, 2001b; Slater, 2013).

Implications for research and practice

Future studies should explore other stakeholders' opinions of the realities of enhancing secondary school home economics education status, and their understanding of public expectations from school home economics education (e.g., Education system administrators and curriculum leaders).

At present, all States and Territories across Australia offer home economics-related subjects such as food technology, food studies, home economics, health and human development, and food for life in secondary schools. However, there are variations in content and pedagogical approaches among them (Home Economics Institute of Australia, 2010). Therefore, future studies should explore aspects of home economics education in different states and school settings of Australia to identify their shared characteristics, differences, and opportunities for improvement of home economics education.

Education authorities and curriculum leaders should seek opportunities for strengthening secondary school home economics education. Allocation of more time in the timetable, provision of more resources, and provision of more opportunities for teachers' professional development are a few ways that this could be done. Moreover, opportunities for the integration of home economics into other curricula or disciplines needs to be investigated. Education authorities and curriculum leaders should act together with teachers, students, parents, and other professionals such as food industry, or health professionals to design realistic and constructive plans to improve secondary school home economics education.

Strengths and Limitations

This study had a large sample size and the respondents represented the main demographic categories in the general Australian population. One limitation is that the study did not examine why the respondents considered home economics to be important. This opens up scope for future studies to explore young adults' and parents' opinions of different aspects of secondary school home economics. Due to the cross-sectional nature of the study, causal inferences could not be made. However, this study design enabled us to capture contemporary Australian parents' and young adults' views of secondary home economics education.

Conclusion

The results suggest that most contemporary Australian young adults and parents of young people value secondary school home economics education. They rated the importance of home economics as similar to that of health, physical education, and digital technologies subjects. These findings suggest that there is a large disparity between the public's expectations of home economics education within Australian secondary schools and the low status in which it currently holds.

Biographies

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INTERNATIONAL FEDERATION
FOR HOME ECONOMICS

REFEREED PAPER

A Healthy Start: Development of nutrition education for newly resettled immigrants and refugees living in Norway

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Abstract

Newly resettled refugees can meet challenges in their encounter with a new food environment. Culturally sensitive nutrition education resources can promote communication about food and health at an early phase of the migration process and facilitate the transition to a new food environment. In Norway refugees have the right and obligation to participate in an Introduction Program. The aim of this article is to describe the development of nutrition education resources (Healthy Start) to be used in the Introduction Program and how by program advisors evaluated its use.

Healthy Start was developed by an interdisciplinary team using an Intervention Mapping (IM) approach. Health and food literacy and culture sensitivity were the guiding concepts throughout the development of the nutrition resources. Independent raters evaluated the curriculum using the suitability assessment method Suitability Assessment Method (SAM) for written materials. The final version of Healthy Start was pilot-tested in four introduction programs and qualitative interviews were conducted with program advisors to evaluate the pilot testing.

The final curriculum was divided into ten modules, based on the Nordic Nutrition Recommendations. It contained culturally-adapted nutrition education about food and health in a new food environment. It consisted of a PowerPoint presentation, teachers' manual, teachers' template, and an activity booklet for participants. Program advisors and teachers found Healthy Start useful, and suitable for participants and easy for them to use.

Healthy Start was developed for use in the Norwegian Introduction Program, but it may be suitable for other settings that involve nutrition education and health promotion with immigrant populations.

KEYWORDS: NUTRITION EDUCATION, DIETARY ACCULTURATION, REFUGEES, TEACHING RESOURCES, INTRODUCTION PROGRAM

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Introduction

Background and aim of the study

Nutrition is an important determinant of an immigrant's health status (Hemminki, 2014). Post-migration diet deterioration has been reported (Gilbert & Khokhar, 2008; Holmboe-Ottesen & Wandel, 2012), and some immigrant groups are more likely to develop non-communicable diseases (Diaz et al., 2017). Although changes in dietary composition described as the nutrition transition occur worldwide, migration can be a situation in which the nutrition transition happens very quickly (Garnweidner, Terragni, Pettersen, & Mosdøl, 2012). Previous studies have shown that resettled immigrants and refugees experience challenges in their encounters with a new food environment (Mannion, Raffin-Bouchal, & Henshaw, 2014). Unavailability of food used in traditional diets, limited knowledge of or information on shopping and cooking options (Terragni, Garnweidner, Pettersen, & Mosdøl, 2014), together with economic constraints, may lead to poorer diets (Gilbert & Khokhar, 2008; Hadley, Patil, & Nahayo, 2010; Sellen, Tedstone, & Frize, 2002). Nutrition education for immigrants and refugees focusing on challenges related to the transition to a new food environment may facilitate the adoption of healthier diets (Eyles et al., 2008; Gunnell, Christensen, Jewkes, LeBlanc, & Christofferson, 2015; Lee, Sulaiman-Hill, & Thompson, 2013; Mannion et al., 2014; Martinez et al., 2013; Renzaho, Halliday, Mellor, & Green, 2015).

In Norway, refugees, persons granted humanitarian status, persons who have collective protection, and those who immigrate to be reunited with family members and have been granted permanent residence permit, have the right and obligation to participate in an Introduction Program run and funded by Municipal Public Authorities (Kavli, Hagelund, & Bråthen, 2007). The Introduction Program can last for up to two years and is intended to teach participants basic skills in Norwegian, to provide insight into Norwegian society, and to prepare them for an active working life. In addition to regular school days (run by trained teachers), participants in the Introduction Program attend additional school days run by program advisors. In 2015, 17,900 individuals participated in the Introduction Program, 22% more than in 2014. Most of the participants (69%) were from Eritrea, Somalia, and Syria; 56% were men, and 44% were women. In Oslo, 1,270 participated in the program (Statistics Norway, 2015).

In 2013, a new law on public health aiming to achieve equality in health among immigrant population came into force (Helse- og omsorgsdepartementet, 2013). Because of this, the Oslo health authorities promoted a series of initiatives targeting immigrants' health. One of the initiatives was to introduce topics related to health in the additional school days run by the program advisors. The Oslo Municipality's Centre for Migration Health (RMA) that, among others, has the task to provide health information to immigrant population, was given the responsibility for developing health and nutrition education resources to be used by program advisors.

The aim of this article is to describe the development of nutrition education resources (*A Healthy Start*) for newly resettled refugees and immigrants participating in the Introduction Program organised by Norwegian authorities. More specifically, the article will focus on the development of the nutrition resources, how aspects related to cultural sensitivity, health and food literacy were addressed and to how program advisors experienced the use of *Healthy Start* in a pilot-implementation.

Theoretical approaches and key concepts used in the development of the educational resources

Culture is a key component of health maintenance and health promotion (Asad & Kay, 2015; Helman, 2007; Napier et al., 2014). Culture has been defined as a set of guidelines that individuals inherit as members of a particular society, and that tell them how to view the world, how to experience it emotionally and how to behave in relation to other people, to supernatural forces or gods (Helman, 2007). Ideas about health vary widely across societies. According to Napier, "If the role of cultural value systems in health is ignored, biological aspects can be emphasised as the only types of measures on wellbeing, and the potential for culture to become a key component in health maintenance and promotion can be eroded" (Napier et al., 2014, p. 1607).

For this reason, to meet the needs of immigrant groups, nutrition resources need to be culturally sensitive and adapted (Foronda, 2008; Kreuter & McClure, 2004; Lagisetty et al., 2017). As suggested by Foronda (2008), cultural sensitivity addresses aspects of intercultural communication by focusing

on consideration, understanding, respect, and tailoring in encountering a diverse group or individuals. Cultural adaptation aims to enhance the effectiveness of interventions by grounding them in the lived experience of the participants (Castro, Barrera, & Holleran Steiker, 2010). As Resnicow et al. (2002) pointed out, cultural adaptation needs not only to include 'surface structure' of interventions but also reach its 'deep structure'. Surface structure refers to observable characteristics, such as language, while deep structure encompasses cultural, social, environmental and psychological factors.

Previous studies have indicated that refugees are likely to have low health literacy (Gele, Pettersen, Torheim, & Kumar, 2016; Wångdahl, Lytsy, Mårtensson, & Westerling, 2014;) and can have limited food skills, particularly when dealing with a new food environment.

Therefore, health and food literacy are important components in the development of educational resources. Health literacy refers to an individual's ability to understand and apply health information "in ways which promote and maintain good health" (Nutbeam, 2008, p. 2074). Low health literacy coupled with poor language proficiency are main barriers to understanding basic health messages and making healthier choices among newly resettled immigrants (Gele et al., 2016; Van Son, 2014; Wångdahl et al., 2014). Together with use of plain language and visualisations (Houts, Doak, Doak, & Loscalzo, 2006; Peregrin, 2010; Van Son, 2014), strategies aimed at meeting the needs of populations with low literacy include having realistic objectives: focus on behaviours, relate new information to the context of patients' lives, break interactions into easy to understand topics, and include interactions after each session (Doak, Doak, & Root, 1985). Food literacy is defined as a collection of inter-related knowledge, skills, and behaviours required to plan, manage, select, prepare, and eat foods consistent with nutrition recommendations (Vidgen & Gallegos, 2014). Nutrition resources addressing food literacy include budgeting, practical cooking skills, recipe modification, learning activities, and embedded topics such as food hygiene, food storage, food security, and portion-sizing (Fordyce-Voorham, 2011).

Healthy Start's development followed the Intervention Mapping (IM) approach (Eldredge, Markham, Ruiters, Kok, & Parcel, 2016). Intervention mapping consists of six steps: the logic model of the problem, the program outcomes and objectives, the program design, the program production, the program implementation plan and the evaluation plan. The purpose of IM is to provide health education program planners a framework for effective decision making at each step in the intervention development process (Eldredge et al., 2016).

The development of the curriculum

Mapping of needs and aims definitions

The curriculum was planned by an interdisciplinary team with a project manager from the Resource Centre for Migration Health. The team included three program advisors from three of Oslo's districts, representatives of the Norwegian Diabetes Association, and three researchers and four to six students in public health nutrition from the OsloMet—Oslo Metropolitan University. The team met regularly (every 15 days for a period of time of two months) to assess needs of program advisors, state aims and to discuss first drafts of the nutrition education resources. Program advisors provided information on the characteristics and needs of the population who participated in the courses and about contextual aspects of the teaching sessions. The teaching session usually took place in a classroom without resources for cooking and with a variable time-frame. The curriculum needed to be in Norwegian, as it was the language used in the Introduction Program. Advisors reported they had limited knowledge on nutrition and that it was difficult to bring up issues concerning food and health, so they expressed the need for teaching material that was ready to use and easy to communicate. As part of the need assessment, previous research among newly resettled immigrants conducted by members of the team was used, in addition to updated literature. In addition, participants in the Introduction Program with different backgrounds were involved in the evaluation of different drafts of the curriculum (as described further on). Following the first step of the IM approach, the working group stated that the goal for the curriculum was to facilitate the transition to a new food environment and promote the adoption of healthy food choices. This goal was to be achieved by communicating about nutrition and health in a way that was culturally sensitive, understandable by a population with limited knowledge of the Norwegian language, low health, and food literacy, suitable to be taught in a classroom, and easy to use by program advisors with limited nutrition knowledge. Topics should include the variety of food and food types available in Norway, food

purchasing and food preparation in a new context, relevant nutrition recommendations, basic information on nutrition and health.

The design and production of *Healthy Start*

Healthy Start was designed as consisting of modules based on the ten recommendations of the Norwegian health authorities (Nordic Council of Ministers, 2013), simplified and adapted to the participants' literacy and food culture. The modules were the following:

1. Have a varied diet;
2. Eat Fruit, Berries, and Vegetables;
3. Minimize the Use of Sugar;
4. Use Oil or Vegetable Margarine;
5. Eat Fish and Seafood;
6. Eat and Drink Dairy Products with a Low Fat Content;
7. Eat Lean Meats;
8. Eat Whole-Grain Products;
9. Minimize the Use of Salt;
10. Drink Water.

A module on the importance of physical activity was developed as well. Each module was provided with (a) teacher instructions; (b) a detailed template that stated the sub aims of each module, the text to be used by instructors, and additional information about the topic of the submodule; (c) a PowerPoint presentation to help the program advisors go through the material during the course and to provide the participants with visual information; and (d) an activity book for participants with tasks to perform during and after the course to enhance comprehension and learning (Figure 1). Consistently, the PowerPoint presentation encouraged interactivity among participants and a dialogue between the advisors and the participants. Figure 2 shows the content of some of the PowerPoint slides used to discuss consumption of fruit and vegetables.

To meet participants' literacy levels, the material used a simple sentence structure and limited the use of multisyllabic words. Words and phrases were chosen from books used in the Norwegian course for beginners. A designer ensured a clear layout that would capture interest and attention. Cartoon characters illustrating people from various ethnic backgrounds performing familiar situations were created. Pictures were extensively included in order to illustrate important concepts. Particular efforts were made to adapt the recommendations to participants' food cultures by using foods and meals formats familiar to them. For instance, the plate model typical in the Norwegian recommendations was adapted to meal structures based on several courses or stews. The "five a day" recommendation was exemplified by using also fruit and vegetables from the participants' country of origin. Information about "wholegrain products" included not only the wholegrain bread commonly used in Norway but also wholegrain products (such as rice or bulgur) available in ethnic shops. In addition, suggestions on how to add wholegrain flour when making chapatti or Naan bread were provided. Similarly, information about sugar consumption included examples of sweets and spreads common in the participants' country of origin (and available in Norway). Information about halal food was also provided. In addition, healthy food that was unfamiliar to participants was introduced, such as cod, salmon, and berries. Given the weather conditions in Norway, the importance of eating foods rich in vitamin D was emphasised and pictures of food products rich in D vitamins were used.

Practical exercises on food literacy were included in the curriculum in order to enhance comprehension and promote use in daily life, for example, on planning of weekly meals, and suggestions on how to prepare easy meals with fish and vegetables.



Figure 1 Illustration of the different components of “Healthy Start” nutrition education material

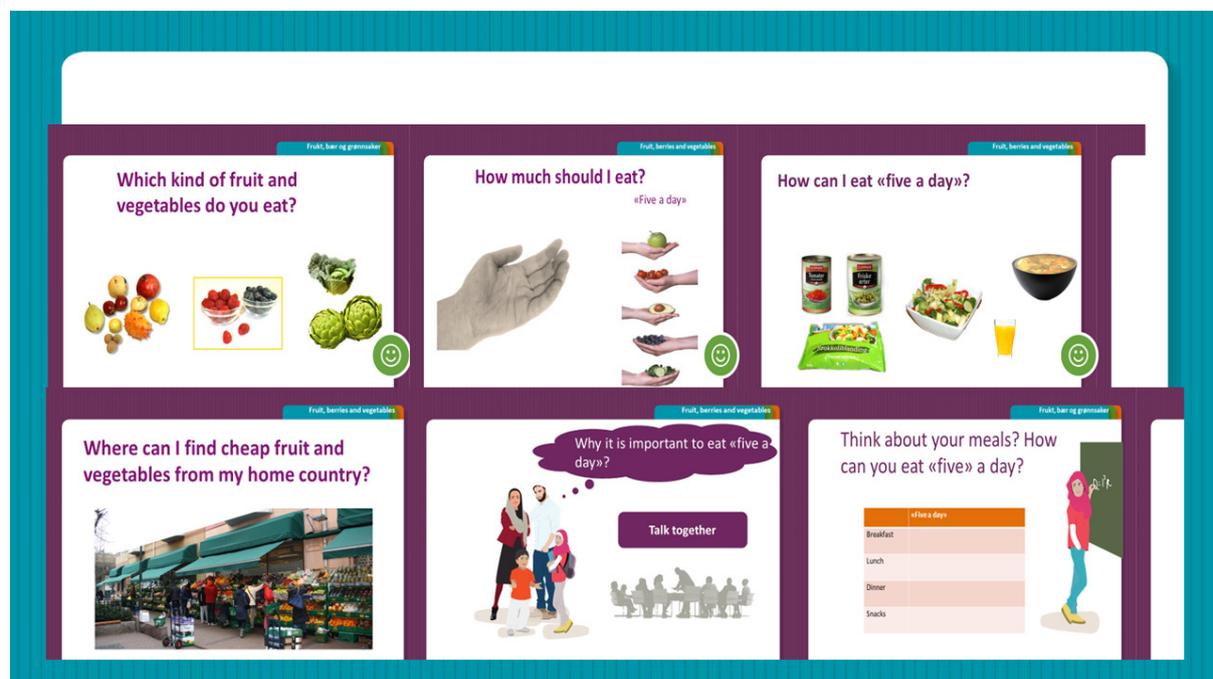


Figure 2 Illustration of teaching material regarding the topic of “Eat 5 a day”

The pilot testing of the curriculum

The three program advisors who participated in the working group used the curriculum in their teaching sessions. The curriculum was pilot tested three times between February and April 2015. Each session lasted an ordinary school day (8:30-14:00). In each session, there were between 20 and 30 participants, women and men, of different nationalities and length of stay in Norway. The most represented countries of origin were Somalia, Syria and Eritrea.

The project leader, students and researchers participated as observers during the pilot testing and qualitatively evaluated how the curriculum was presented by instructors and received by participants.

After each session, program advisors were interviewed by researchers to evaluate the teaching session and the user-friendliness of the curriculum. Similarly, a group of between six and ten participants of different nationalities from each session was asked to evaluate the comprehensibility and utility of the nutrition education session. This was done by using a qualitative interview asking simple questions about the relevance of the content, its comprehension, its cultural appropriateness and its usefulness.

Observations during the teaching sessions indicated that there was a high heterogeneity among participants in terms of age, nationality and mastering of the Norwegian language. Those with better language skills tended to help others when something was unclear. Contrary to the regular Introduction Program school days, where participants are divided into classes according to their Norwegian fluency and previous education, participants to these additional days organised by the program advisors were blended. The program presented the content of the nutrition education resources in an interactive way, frequently asking questions and making sure that the content was understood. Students participated actively, and many expressed surprise, for instance when being informed about the content of sugar in food items such as fruit yogurt and soda.

In the interviews after the pilot-testing, program advisors indicated that the teaching material was suited to the target group, but proposed relevant changes. The cartoon characters were seen as not fully integrated in the education materials and not fully representing program participants. Course leaders mentioned that the focus on halal food could reproduce the stereotype that all participants from Muslim countries wanted to follow halal traditions. In addition, the focus on halal was also perceived as excluding non-Muslim participants. The program advisors indicated more flexibility was needed in the modules to better fit with time constraints and participants' literacy, needs, and interests. Interviews with participants indicated that the teaching material was useful and understandable. However, the interviews also indicated that the curriculum in some instances did not meet the needs and expectations of all participants. Basic information about where to purchase food was seen as superfluous, as most of the participants to the Introduction Program have been living in Norway for a while. It was mentioned that some concepts were too abstract (such as fibre), while other participants expressed the need for more advanced information about diet and health, for instance on how diet is related to diabetes. Both program advisors and participants stressed that food pictured in the nutrition resources had to consider the economic constraints of newly resettled immigrants avoiding, for instance, the use of pictures of organic products—usually more expensive—and suggest cheaper, yet healthy alternatives. In addition, it was suggested to add more food and dishes from the participants' country of origin.

Following those suggestions, the cartoons were better integrated in the material and represented a more heterogeneous population. Information about halal food was removed from the main modules but remained available if needed. The curriculum was given a more flexible structure so program advisors could more easily pick and choose topics, and more advanced information about food and health was made available as an option. Pictures of less expensive healthy food were used and more pictures portraying the food of immigrants' countries were added.

The revised curriculum was tested by two of the program advisors involved in the previous pilot testing. The new evaluation indicated that the material better suited the heterogeneity of participants and was easier to use. Four to six participants were also asked to evaluate the revised curriculum and found the message of the pictures and slides to be clear and informative.

Suitability assessment of the final material

The suitability assessment of materials (SAM) instrument is a validated method for evaluating written health-related education materials (Doak et al., 1985). It is used to assess printed materials in terms of categories and factors known to enhance people's understanding of health information (Garnweidner-Holme, Dolvik, Frisvold, & Mosdøl, 2016). The SAM method rates written materials on 22 factors grouped into six categories: content, literacy demand, graphics, layout and typography, learning stimulation and motivation, and cultural appropriateness. Each factor is rated as superior (2 points), adequate (1 point), or not suitable (0). SAM evaluation was used throughout the development of the curriculum by team members.

Before the curriculum was made available, a SAM assessment was undertaken by four independent raters with different professions and ethnic backgrounds: a teacher in health economics; a researcher, expert in health literacy with Somali background; a nurse with experience in health communication with immigrants; and a nutritionist with experience in researching food habits among immigrant populations. In addition, two Norwegian teachers working in the Introduction Program were also asked to go through the material to make sure that words and expressions used in the nutrition education resources were suitable for participants with low literacy.

When assessing a large amount of materials, scholars suggest selecting only some materials for evaluation. In this case, the four investigators evaluated and independently scored the PowerPoint presentation and participants' activity booklets for two modules (*Eat Fruits, Berries, and Vegetables* and *Eat and Drink Less Sugar*). The material was rated as superior in all factors. An exception was the cultural appropriateness of the *Eat Fruits, Berries, and Vegetables* PowerPoint presentation, which scored 58% (counting 100% as maximum score). The raters commented that suggested adding more fruits and vegetables from other food cultures. This change was made in the final version of the curriculum.

Pilot implementation of *Healthy Start*

All Oslo program advisors in the Introduction Program who did not participate in the development of *Healthy Start* were asked to pilot-implement the curriculum in April and May 2016 and to participate in a follow-up interview to evaluate the use of the nutrition education resources. Four Introduction Program advisors responded positively, and five respondents participated in the follow-up interview (two instructors attended the same teaching session). For the purpose of this follow-up a semi-structured interview was used. Detailed questions were asked on the use of the different parts of the nutrition resources and more open questions about how they evaluate the users' friendliness of the material and its suitability for participants. The interviews with the program advisors were tape-recorded and transcribed verbatim. Interviews were analysed using a template analytic technique (Crabtree & Miller, 1999). Analysis of the text was guided, but not confined, by preliminary themes based on the interview guide. During the coding of transcripts, inductive codes were assigned to segments of data that described a new theme observed in the text.

Program advisors participating to the interview were all women and their experiences in the Introduction Program ranged from 2 to 14 years. Classes ranged from 15 to 60 participants from multiple nationalities between the ages of 16 and 53. The gender distribution of participants was approximately equal, and Norwegian skills varied.

In the interviews conducted after pilot-testing emerged that program advisors and welcomed having teaching material suitable for the Introduction Program.

I am very satisfied. You can just use it, everything is ready and you just have to print it. You do not need to "reinvent the wheel" yourself. By using this [*Healthy Start*] you avoid having [homemade] material that is different in each introduction program (program advisor 2)

I was so happy! You have no idea ... (laugh) ... I've been looking for something like that for 15 years. When I read the material I thought: this is very good, this is really something I can use (program advisor 1).

The program advisors felt that the material did not require much time for preparation and had a nice flow and good structure.

That we could just use *Healthy Start* without much preparation ... Our 'business' goes so fast that if the material is not user friendly we just put it aside (program advisor 2).

The pictures and illustrations were deemed clear and easy to understand. One specifically mentioned the *Eat Five a Day* picture illustrating five hands each holding a portion of fruit, vegetables, or berries:

This was very useful. 'What is a serving'? It is a handful. Good to know. One does not go around with a scale (program advisor 3).

They also said the booklet worked well with the PowerPoint presentation and promoted greater participation and understanding

Program advisors said the teaching sessions gave the opportunity to discover that many participants were not aware of the content of food.

There was, for instance, a woman who said, 'I do not eat macaroni. I have diabetes. But I eat pasta.' And no one reacted and said, 'Hello! Macaroni and pasta are the same' (program advisor 2).

The topics that generated the most interest varied. Informants highlighted that the parts related to making a food budget were important for participants and that the cost of food was a recurring theme. High commitment emerged when participants recognized food from their own food culture. Healthy labels captured the participants' interest. Tasks such as planning a weekly menu were popular as well. Based on the dialogues and activities performed with the participants, the program advisors stated that key information about healthy eating was mostly understood by the participants.

It was clear that this theme was relevant for them. They were involved and participated (program advisor 4).

When asked for suggestions for improvement, program advisors focused mostly on teaching aspects, such as the opportunity of having more groupwork activities in the classroom and indications on how to organise the classroom (around a table or horseshoe).

A relevant aspect that emerged during the interview was the great variation in the time used for the teaching sessions. One program advisor used all the *Healthy Start* education resources in ten teaching sessions of three hours each. Two had a half-day session and presented in one case, two modules and in another, five modules. One used all the *Healthy Start* modules in a half-day day session. Preparations before the teaching session(s) varied between three to fifteen hours. Some expressed that they would have liked to have more time to go through the teaching material beforehand but that they experienced the material easy to use also without much preparation.

Discussion

This study described the development of a nutrition education curriculum for newly arrived immigrants and refugees to be used by program advisors with limited knowledge on nutrition. The curriculum was developed in cooperation with program advisors, experts in the field of health promotion, students and researchers in public health nutrition and a designer. The program advisors contributed to the development of the education resources by providing information about their own needs and advice regarding the setting, and gave feedback on how participants to the Introduction Program responded to the information provided. Researchers and experts in public health contributed by providing advice on how to develop culturally-sensitive nutrition education resources and conduct the evaluation; students contributed to the development of the content, participated as observers to the pilot-testing and conducted interviews with program advisors and participants in the teaching sessions. The education resources were pilot-tested five times by members of the research team and subsequently pilot-implemented four other times by program advisors that did not participate in the development of the teaching material. In total, some 200 participants in the Introduction Program attended the teaching sessions. The SAM evaluation rated the material as superior, with high scores for each of the categories under evaluation. The high scores could be due to the fact that raters could choose only among three categories (*not suitable*, *adequate* and *superior*); more variation in the scale could have produced more nuanced results. However, the feedback provided by program

advisors indicated that *Healthy Start* was easy to use and that the information provided was useful and easy to understand for participants. Also the observation during the pilot-testing and the interviews with small groups of participants indicated that the information provided was relevant.

The nutrition education resources can be adapted to suit different participants' characteristics and teaching sessions as the teaching material consists of several modules that can be used independently from each other and include additional information on food and health to meet needs of both program advisors and participants with higher health literacy.

Although the flexibility has been proposed by program advisors, the variation in the time allocated for the teaching sessions emerged in the final pilot-test raises some concerns. To promote interaction with participants and assure comprehension of key messages, it may be useful to suggest not to go through all the teaching material in just few hours.

As it was not expected that the schools have kitchen facilities or that there is time allowed guided visits to grocery shops, the education sessions were developed to be performed in a classroom. As previous studies have shown, cooking workshops and visits to shops improve food skills and increase familiarity with a new food environment. The nutrition education resources, particularly the participants handbook, contain a large variety of activities that can be performed outside the classroom.

Studies on the development of nutrition education for immigrants and refugees tend to focus on immigrants coming from a specific country (Gunnell et al., 2015; Lee et al., 2013; Mannion et al., 2014; Martinez et al., 2013; Renzaho et al., 2015) and the importance of cultural targeting in health promotion programs has been emphasized (Kreuter, Lukwago, Bucholtz, Clark, & Sanders-Thompson, 2003). The participants to the Introduction Program include, instead, multicultural population, a factor that increases the complexity of the cultural adaptation of educational materials for multicultural populations emerged. In accordance with Gunnell et al.'s (2015), *Healthy Start*, instead of focusing on diversity, addressed common challenges and food-related health problems experienced by newly arrived immigrants. The knowledge about these challenges derives from previous work with migrant populations previously conducted by researcher members of the team that developed the nutrition education resources (Garnweidner et al., 2012; Terragni et al., 2014; Wandel et al., 2016). These challenges included encountering an unfamiliar food environment, economic constraints, and the main health risks faced by the immigrant population, such as diabetes, heart disease, and health challenges related to the climatic conditions of Norway.

The process of transferring the knowledge about these challenges into nutrition education resources is not uncontroversial, however. Although well-intentioned, nutrition education programs can emphasise the position of migrants as subjects in need of being provided such education. As reported by Minkoff-Zern & Carney (2015), historically, many public health campaigns and interventions have "served as media for legitimising the stigmatisation of certain population segments who are assumed to be noncompliant with social norms and expectations concerning hygiene, health and sanitation" (Minkoff-Zern & Carney, 2015, p. 464). For these reasons, it is of great importance that nutrition education incorporates aspects of cultural sensitivity as indicated, for instance, by Foronda (2008). These include: avoid stereotyping, understand others' values and experiences, and respect the cultural richness of participants' origin. It is a limitation of this study that, at this stage, extensive research on how participants in the Introduction Program experienced the provision of *Healthy Start* has not been conducted. However, a systematic follow-up and evaluation of its use by program advisors and participants is planned.

An important contribution of this education material is that it specifically addressed the needs of program advisors and provided teaching material they felt comfortable using. A barrier to providing effective nutrition education is health workers' and other professionals' limited knowledge of nutrition (Islam, Paddock, & Dollahite, 2015; Kris-Etherton et al., 2014). Providing nutrition education resources that are suitable for, and personnel working with, newly resettled immigrants can promote communication on health and nutrition at an early stage of the migration process. Castro et al. (2010) have commented that researchers may spend years developing, refining, and testing the efficacy of a theory-based and structured intervention. However, if an intervention lacks relevance and fit with the needs and preferences of users, its implementation can be compromised. Program advisors' positive responses to the user-friendliness of the curriculum and relevance for participants

may encourage them to talk about food and health in the Introduction Program and contribute to facilitate the transition to a new food environment.

Conclusions

Assuring good health for immigrant population is of great importance. Nutrition education resources that are culturally sensitive promoting communication about food and health at an early phase of the migration process can facilitate a healthy transition to a new food environment. This is the first study documenting the development of nutrition education in Norway and, to our knowledge, in the Nordic Countries. *Healthy Start* was developed for use in the Norwegian Introduction Program, but it may be suitable for other settings that involve nutrition education and health promotion with immigrant populations. It goes beyond the scope of the nutrition resources to assess its impact on the nutritional status of newly resettled immigrants. However, we expect that through this program participants could find it easier to orient themselves in a new food environment and know more about healthy food alternatives available. This can support the capability of making healthier food choices.

Biographies

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