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Nature of nurture: Mentally superior young adults in the Philippines

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Abstract

This article compares aspects of the nurturance of giftedness discovered in primary data with those found in secondary research, and pinpoints similarities or convergences. The qualitative research project involved 34 pairs of mentally superior young adults and their respective biological mothers, living in the National Capital Region of the Philippines at the time of the data collection. Convergences in the primary and secondary data indicate that mothers' educational background and training affect their parenting; and that prenatal care, medical supervision and nutrition during the early years are of utmost importance. The family configurations are similar in terms of parental ages and number of siblings. Nature of nurture comes in the form of deficiency and growth motivations that could develop the intended traits and behavior associated with gifted individuals; knowledge of these possible links to intellectual development can improve parents' and schools' practices in nurturing children. The findings provide information that can be used in curriculum planning and mentoring programs to direct the nurturance of identified mentally superior individuals towards optimizing their potential.

Keywords: talent development; special education; parenting; socio-economic background; maternal education

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1. Introduction

Psychometrically, giftedness is typically defined as intelligence test scores above 129 on the Stanford Binet scale or its equivalent; about two percent of individuals score in this range (Matthews, 2005). Variations to this definition usually depend on the purpose of identification. For example, for program placement a lower or higher percentage may be classified as gifted based on the size of the population and the funds available. In relation to identification, an American study of 705,074 elementary students found that teacher nominations were more valuable than other referral sources especially in identifying the gifted in minority groups and in families from low socioeconomic classes (McBee, 2006); indicative of a need for an interdisciplinary approach to identification of the gifted. Within the Philippines, four indicators of mental superiority are recognized (1) being granted a scholarship based on academic merit, (2) acceptance to quota courses and/or schools known for their high academic standard, (3) formal diagnosis and identification by testing institutions and psychologists, and (4) teacher nominations.

This article distinguishes those identified to be above average to superior based on psychometric measures to be "mentally superior". The term "gifted" is reserved for the state of possessing innate qualities, be they developed or raw potential, that developmental and information-processing intelligence theories consider to be indicative of giftedness; and "eminence" as the manifestation of such qualities for which those regarded as gifted have received public acclaim. The conceptions society has of intelligence have been influenced by various personalities whose reputations and work have fueled the debate regarding whether it is nature or nurture that determines giftedness. "Most models of talent development recognize that high ability alone is not sufficient for success in adulthood and postulate that non-cognitive characteristics such as motivation are essential in transforming childhood ability into expertise and creative productivity" (Olszewski-Kubillus, Subotnik, & Worrell, 2015, pp. 146-147). Clark (2012) recommends practices in the nurture of identified gifted within the home and school.

It is not the intention of this paper to engage in the nature versus nurture debate because it recognizes the roles of each in the manifestation of giftedness. Instead it explores various developmental provisions linked to intellectual performance discussed in literature to discover whether those links hold true within the context of the life experiences of 34 pairs of mentally superior young adults (MSYAs) and their respective biological mothers. In the search for the nature of nurture, the literature was reviewed to locate indicators specifying developmental provisions which facilitate the nurturance of mental superiority. Descriptive themes of financial resources, psychosocial support and cultural enrichment have been found through the reviewed literature.

2. Review of Literature

2.1 Nature of Nurture

In the course of its evolution, the nature-nurture debate has come to include "nature versus nurture" [1970s]; "nature and nurture" [1980s]; "nature via nurture" [1990s]; and currently, the concept of "the nature of nurture" (Hay, 1999, p. 75). The term "nature" pertains to "all inputs that are broadly biological while "nurture" refers to those that stem from a person's environment" (Howe, 1997, p. 141). The debate pitted the two against each other, forming factions of *nativists* and *environmentalists*, but as more research indicated that "environment significantly influenced intelligence, relegating nativists to a minority position" (Winkler & Jolly, 2012, p. 148), the importance of a nurturing environment for talent development was recognized. A confluence of studies exploring environmental factors that contribute to the nurturance of one's intelligence has moved the debate to

acknowledging the interplay of nature and nurture. This led to the pondering of the nature of nurture; thus, the current search for the type of nurturance that could be accorded to each individual for maximal development.

Theorists like Renzulli (1978) and Sternberg (1997), additionally Tannenbaum, Bloom, Gagne, and Subotnik and Jarvin (in Olszewski-Kubillus et al., 2015, pp. 144-147), work on providing and evolving models of intelligence reflective of both nativist and environmentalist perspectives. They all start with baseline definitions of what human intelligence entails then move towards the type of environment that would facilitate its development. The Philippines reflects more of a nativist perspective. Baldo's 1987 study presenting the Filipino conceptualization and characterizations of giftedness reveals that Filipinos, first and foremost, believe that giftedness is a "God-given talent" followed by "inborn talent inherited from parents". Thereafter, it is attributed to: "natural talent rarely found in others, superior intellectual potential, ability to excel in many fields, ability to come up with original ideas, ability to use one's common sense, and ability to adjust to any situation". Five years later, Camara (1993) advanced her reconceptualization of giftedness wherein facets of a diamond are used to represent a broad spectrum of talents that are innate. There may be a need to conduct more Philippine-based research to find out whether the country has since moved towards a more environmentalist perspective.

A most compelling discussion of nature via nurture was put forward by Ridley (2003), a scientist and science writer. He stated that intelligence is "both cause and consequence of our actions…the adherents of the 'nurture' side of the argument have scared themselves silly at the power and inevitability of genes, and missed the greatest lesson of all: the genes are on their side" (p. 6). His main thesis is that 'nature versus nurture' is a false dichotomy and that the interaction between the two must surely be acknowledged. Ridley speaks of genes as what allow the human mind to learn, to remember, to imitate, to imprint, to absorb culture and to express instincts; and refutes the descriptions of genes as "puppet masters, blueprints or just carriers of heredity". He proposes that although they may direct the construction of the body and brain in the womb, they also dismantle and rebuild what is deemed vital in response to experience. His contribution highlights how genes sustain our survival and progression into our current state of being. Indeed, genes may dictate some aspects of cognitive development. Nonetheless, the roles of nature and nurturance are magnified in the large Minnesota Study of twins reared apart, which commenced in 1979. Similarities such as personality, interests and attitudes are attributed to genetics whereas the differences (culture and religious practices) are credited to the nurturing received (McGue et al., in Plomin & McClearn, 1993). Conclusions as to the role played by nurture in the enhancement of nature are summarized by Lazear (1999, pp. 2-3), who states that "intelligence is not fixed or static at birth; intelligence can be learned, taught, and enhanced; and intelligence is a multidimensional phenomenon that is present at multiple levels of our brain/mind/body system". Moreover, Lazear concurs with Sternberg (1997, p. 91) who suggests that the intelligent person exhibits "the capacity to learn from experience, and the ability to adapt to the surrounding environment".

Traits and behavior that indicate mental superiority then were suggested and studied to establish practices that could develop intelligence. Intelligent human beings are deemed to have the abilities to "solve problems well, reason clearly, think logically, use a good vocabulary, draw on a large store of information, balance information, be goal-oriented, and show their intelligence in practical, not just academic, ways" (Perkins, 1995, p. 33). Renzulli's three-ring conception of giftedness recognizes the interaction of innate ability and the roles of creativity and task commitment within an environment as represented by the houndstooth pattern which serves as the background of this model. He later operationalized this to pinpoint what comprises a satisfying lifestyle, with implications to the school environment (Renzulli, 2002). Sternberg (2003) put forth his idea of teaching for expertise based on his theory of successful intelligence, which includes curriculum examples (pp, 5-7) and advocates teaching beyond conventional expertise with his Balance Theory of Wisdom (pp. 6-8). Subotnik's model of talent development requires the provision of opportunities in the form of lessons, school programs, and outside-of-school programs driven by expert teachers, mentors and coaches (in Olszewski-Kubillus et al., 2015, p. 146). Given that these traits and behavior identified to be 'intelligent' and therefore desirable, the next thrust of research became the nature of nurture.

2.2 Factors linked to Intellectual Performance

The nature of nurture is a broad spectrum of needs and wants that are meant to satisfy individuals based on their own personal standards. Maslow's Theory of Human Motivation based on a hierarchy of needs (1954, 1987) categorizes physiological, safety, love/belonging and esteem needs as deficiency motivations, and identifies self-actualization as a motivation for growth. This research project considers these deficiency and growth motivations in the search for the nature of nurture. The nurturing factors were classified into two categories to see what the parent-participants deemed essential for survival and what allowed for actualization of the potential of their children.

Deficiency motivations - The need for financial resources in the nurturance of giftedness is not to be contested especially in the Philippine context. Government-funded schools with stringent screening and admission policies like the Philippine Science High School, Philippine High School for the Arts and the University of the Philippines can only accommodate a limited number of qualified students. According to the 2013 World Development Indicators (World Bank, 2015), the country's population was at 98.4 million with an urban density of 330 people per square kilometer. Public resources are insufficient and highly rated private schools charge relatively higher tuition and miscellaneous fees to cover institutional expenditures such as teachers' salaries and benefits. Still, the families who can afford the steep fees see enrolment in such schools as an investment.

A research synthesis of over 8,000 studies suggests nine factors to have direct influences on cognitive, affective, and behavioral learning in childhood and adolescence, which account for greater academic achievement (Walberg, Williams, & Zeiser, 2003). Of these nine factors, eight were noted to contribute positively to learning outcomes while "exposure to mass media and popular culture, notably television", was inversely related to learning outcomes. Four of the factors noted can be related to Renzulli's behavioral characteristics on which superior students rate highly (Renzulli, Smith, White, Callahan, Hartman et al., 2010). These are the "ability or prior achievement as measured by standardized test, chronological age or stage of development, motivation or self-concept as indicated by perseverance on tasks, and instructional time engaged in learning". The other four relate to the learning environment – "curriculum of home life, classroom group environment, peer group selected outside school", and "the quality of instruction, including both curricular and psychological aspects". The research findings call upon the homes to reflect on what is being taught and caught within the family unit, and the schools to improve instruction and address more than just the academic aspects of the curriculum, ideally looking into the social dynamics within the system and the well-being of each individual.

Walberg and associates (2003) likewise mentioned that intelligence, perseverance, and stimulating social environments are not guarantees of adult success. Combinations of other traits and conditions play influential roles at various stages of childhood, adolescence, and adulthood – with luck and the vicissitudes of opportunity playing their parts. Nonetheless, the findings strongly suggest that parents, educators, and others should think carefully about how to encourage constructive psychological traits, and how to design stimulating conditions that are likely to enable boys and girls to fulfill their potential. While, Tolentino and Dullas (2015) found that Filipino farm children from poor socio-economic backgrounds have low levels of negative emotion and high levels of positive emotion, global life judgment and work satisfaction, which are indicative of high levels of subjective well-being. Their findings concur with research mentioned in their paper of household income and child material deprivation having no clear linear relationship with subjective well-being (Knies, 2011; Rees et al., 2011, both in Tolentino & Dullas, 2015, p. 56).

Jacobs, Griffin, and Wright (1998) highlight the importance of providing activities and other support for maintaining girls' interest in science in a rural environment. They examined relations between parent attitudes, intrinsic value of science, peer support, available activities, and preference for future science careers of 229 science-talented, rural, adolescent females and their mothers. Current intrinsic interest in science was most strongly related to preferring a science career, but previous achievement in science, in terms of grades, extra-curricular science activities and acceptance of peers, and socializers' attitudes as measured by mothers'

perceptions of the value of science for women and of their daughters' abilities were also related. They concluded that exposure, acceptance, and the mothers' high-regard for science and daughters were instrumental in nurturing the interest of these future scientists. A Philippine study (Rabago-Mingoa, 2006) found that a typical outstanding Filipino scientist was usually from the middle class, studied in the Philippines from primary to college levels then abroad for postgraduate studies. Their personal traits included a strong drive to succeed, and being intelligent, religious, cooperative, and nationalistic. Environmental factors were enrolment in good schools, access to highly qualified and inspiring teachers and mentors, and either proximity to nature during their growing up years or substantial exposure to nature and science equipment.

In terms of nutrition, the reviewed literature suggests the adverse effects of dyes, coloring, preservatives and artificial flavorings and malnutrition, and protein energy malnutrition (PEM) on cognitive abilities (Ceci, 2000 in Sousa, 2003, p. 50); and the favorable effects of breastmilk (Ceci, 2000 in Sousa, 2003; Gale & Martyn, 1996; Michaelsen, Lauritzen, Jørgensen, & Mortensen, 2003; Minaker & Hanning, 2002). Furthermore, Ceci's large-scale study of about one million students found that after eliminating dyes, coloring, preservatives, and artificial flavorings from their lunch food, IQ scores increased by 14%. It also found malnutrition and PEM to impact the elderly (aged 65 and older) and very young children (aged 0 to 3) with detrimental effects in infancy expressed in motor-development indices, scholastic achievement, and composite measures of performances such as IQ. This age factor, similarly noted in Grigorenko's (2003) intensive review of literature regarding the relationship of nutrition and intellectual performance, started with the assumption that adequate nutrition provides a necessary, but obviously not sufficient, condition for optimal intellectual functioning (p. 91). However, for high school students, there was contradictory evidence linking missed breakfasts to cognitive performance, indicating that younger children may be more affected by the lack of breakfast.

Findings point towards the importance of nutrition during the early years, with breastmilk as a contributor to the overall well-being of infants and young children. In a study that removed socioeconomic advantage as a confounder, Gale and Martyn (1996) found those who had been exclusively breastfed to have gained slightly higher scores than those bottle-fed, or fed with both breast and bottle – but the scores were not significantly higher; IQ, however, was lower in participants who had used a pacifier in infancy; and IQ scores fell as the number of older siblings increased. The majority of studies examining the effect of breastfeeding on cognitive development found an advantage of breastfeeding, which remains when the results are controlled for potential confounders (Michaelsen et al., 2003, p. 151). Moreover, the National Academy of Sciences reported finding a gene to account for higher IQ in breastfed infants (Bates, 2007). In two studies involving 3,000 breastfed infants in Britain and New Zealand, it was found that breastfeeding raised intelligence to an average of nearly 7 IQ points, if the child had a particular version of a gene called FADS. Children (90%) who had at least one copy of the "C" version of FADS yielded higher IQ when they were breastfed while the rest (10%) who carried only the "G" versions of the gene showed neither IQ advantage nor disadvantage due to breastfeeding. Given that findings related to intellectual performance and breastfeeding are still contradictory, critics are pointing to socioeconomic status and maternal IQ as other factors (World Health Organization in BBC News, 2006). Minaker and Hanning (2002) stated that breastfeeding is more likely to be initiated and sustained among women who attend prenatal classes, have higher levels of education, are married, and are not experiencing financial difficulty.

The family configuration of those considered mentally superior is important as it leads to opportunities to make inferences on the resources available, not only financially but also emotionally. Some articles suggest that birth order and larger families expose an individual to environmental conditions that influence intellectual abilities (Sousa, 2003, p. 50). Parents with more than three children may have a more difficult time providing all the needs of their children in terms of time, talent and treasure than those with one or two children. By revisiting Breland's 1974 survey of 800,000 students who took the National Merit Scholarship Examinations, Storfer (1990, pp. 29-30) found that parental ages, birth order, family size and child spacing affected IQ and other test scores.

Parental ages - Storfer gathered the age ranges of parents when eminent men and women were born from three different studies. For fathers, the average range was from 35 to 38 years and for mothers, 29 to 30. The

average age for fathers was a little more than 36 while the mothers' was over 29. In a related study of 33,000 children in the United States, Brownstein (2009) found that children of older fathers scored slightly lower on IQ tests while children of older mothers tended to perform slightly better. However, the findings have been questioned citing possible factors like the attitudes of men in their fifties being less involved in parenting; thus, fathers were not providing important cognitive stimulation for children through play and social interaction that is highly related to performance on intelligence tests (Michelle Killen quoted by Brownstein, 2009).

Birth order and family size - The trends in these categories were that intellectual performance declines with increasing family size and later birth order, with the exception of only children – whose performance tends to be slightly poorer than that of children who occupy most advantaged "sibship" positions. Storfer claimed that the highest IQ scores are most likely to be achieved by firstborns in families with two or three children, followed by firstborns in families of four to five children then by second-borns in families of two and three children. This rate at which test performance declines with increasing order is more pronounced in the middle and lower social classes than in upper-middle and upper classes; exceptions to these general findings were limited to cultures wherein extended family or community provides considerable assistance in infant care or where extraordinary attention is routinely paid to each new child such as among Quakers, Mormons and Jews.

Child spacing - A chronological age difference of three or more years was said to be ideal for variations in IQ and other test scores to be insignificant. According to Storfer (1990), in a three-child family the average test scores were quite high – only 1.5 points lower than a firstborn in a two-child family – as long as there was a gap of three or more years either between first and second children, or between second and third children. The test score will be considerably lower when children are closely spaced – a disparity of approximately 7 points between firstborns and lastborns (favoring the former).

2.3 Self-actualization as a motivation for growth

"Growth takes place when the next step forward is subjectively more delightful, more joyous, more intrinsically satisfying than the previous gratification which we have become familiar and even bored" (Maslow, 1999, p. 53). Enriching experiences that contribute to a person's self-actualization are categorized as a growth need. The provision of these is considered a factor for the holistic development, given the desire to transform those identified as mentally superior into "gifted" individuals who have an increased sensitivity. It is thought that because of this heightened sense, experiences – either direct or vicarious – help them share the pain of the world, and future career goals can be drawn from them (Silverman, 1993); thus, the need to expose these individuals to various experiences is encouraged.

In Datu and Valdez's (2012) study of ten Filipino adolescents, they found that the adolescents' definitions of happiness included the 'satisfaction of wants', 'absence of worries', 'expression of positive emotions', 'a motivational drive' and 'fulfillment of relational needs'. The last definition pertains to interacting with a social support system composed of family, friends, peers and colleagues. They also mentioned that interacting with others is highly rewarded in the Philippine culture due to its closely-knit family structure (p. 25). While, Garces-Bacsal (2013) looked into Singaporean families as contexts for the arts and found that the students felt family activities and influences were important to them and their parents shared their values and their connection with the arts (pp. 12-13). The artistically talented students perceived parental support in the time spent with their nuclear and extended family members in activities such as overseas trips, having meals together and chatting with their parents, shopping during weekends, or watching movies and television as a family. The findings show that limited parental background and involvement in the arts were not a hindrance to a parental show of support.

In a 1979 study by Csikszentmihayli and Beattie (in Silverman, 1993) 30 men from poor immigrant backgrounds were interviewed: one half were successful intellectuals and the other, blue-collar workers. The study determined factors that differentiated the life paths of these two groups from similar backgrounds and found that early in their lives (between ages eight and eighteen), each of these men developed a life theme

around a particular problem he had experienced – whether it be poverty where the solution was hard work and thriftiness, or injustice where it entailed the prevention of injustice. All of those who became professionals had been read to as young children, or if their parents were illiterate, they were told elaborate stories. Reading became a hobby that allowed them to learn that they were not alone in their problem – that there were others who suffered similarly. This eventually led to their setting professional goals and undergirded their striving for success. In contrast, those who remained in the blue-collar class generalized their own experience to others.

A broader view of life themes can help in realizing more profound life paths. Travel, attendance at concerts, museum visits, religious and spiritual practices, and other activities related to one's heritage may be considered as motivations for growth. Travel, competitions, visiting extended family members and friends, and joining organizations and various events help in creating a broader view of the world much like Lovecky's (1994 in Lovecky, 2003) global definition of the gifted, as individuals who are well-immersed into the realities of the world.

3. Materials and Methods

This research project[1], for which data were collected in 2011, investigated and describes the nurturance that the mentally superior young adults received during early childhood and school years as rated by their respective mothers. Descriptive research helps determine profile or status, assets, attitudes, opinions, views or behavior; compare and contrast characteristics of communities, people, events and things; discover a cause-effect relationship between non-manipulated variables making specific predictions of events, and discover or test the association of two or more variables. Since this was not an experimental study, no attempt was made to change behavior or conditions as things were measured as they happened to be; the case, case series, cross-sectional, longitudinal and retrospective studies are examples of this approach (Hopkins, 2000).

Interview questions were included in the questionnaires to give participants an idea of the type of information the research explores. Gathered information was on the household income, the quality of prenatal care they received while being pregnant with their MSYA counterpart, child-rearing practices, and decision-making processes within their family. By allowing the participants to think about their answers beforehand, the follow-up interviews were in-depth and built on what was said. Greenbaum (1993) described in-depth interviews as one-on-ones, which usually involve a trained moderator and a qualified respondent (pp. 5-6). This varies from thirty to ninety minutes, with the average being approximately forty-five minutes. There were advantages to using this method due to the highly personal nature of the research topic that makes it less suitable for open discussion in a group environment. A selected number of pre-qualified participants were interviewed for this project. On occasions when participants' schedules did not permit face-to-face interviews, alternative modes such as phone interviews and online chat sessions were used; a mother-participant based in Italy communicated her insights through questionnaire and online chat. A focus group discussion with four mother-participants was conducted as well.

3.1 Research Questions

The inquiry sought to answer the following questions: (1) what convergences are found in the literature review and the participants' experiences? and (2) what kind of nurturance did the mentally superior young adults receive from the womb-to-school-aged-years?

3.2 Research Project Participants

At various stages of the project, three different groups of mentally superior young adults paired with their respective biological mothers were involved. In the initial stage, in-depth interviews were conducted with five

[1] This dissertation research on which this article is based was approved and conducted under the University's guidelines.

MSYA-mother pairs ($N_1 = 5$; $M_1 = 5$); when the questionnaires were developed three MSYA-mother pairs tested them out ($N_2 = 3$; $M_2 = 3$); and the final stage included 34 MSYA-mother pairs ($N_3 = 34$; $M_3 = 34$). All the MSYA resided in the National Capital Region (NCR) at the time of the study. It should be noted that the researcher did not ask about where the MSYA were born and brought up.

The selection criteria for the MSYA-participants included a superior rating on a standardized intelligence test, the age range 20 to 29, civil status of single, the availability of their respective biological mothers, and their willingness to participate. All the MSYA-participants had never married and were without children at the time of data collection. The mother-participants were from various disciplines including medicine, engineering, law, teaching, and the social sciences; their ages ranged from 38 to 66.

3.3 Delimitation of the Study

In the Philippines, recognized gifted have been rated highly on the required battery of standardized tests, for both aptitude and achievement, through the screening process of specialized school systems or through the services of qualified psychologists with private practices. Research focused on the psychometric definition of intelligence to identify the MSYA, but the researcher did not administer any standardized IQ testing to the MSYA-participants. They were accepted as superior based on nominations from their schools through previous teachers in the gifted programs, psychologists and guidance counselors, who had access to the records of the nominated MSYA.

Participation of the MSYA and their mothers was voluntary; thus, a number of those nominated declined due to death of biological mother, being abroad, undecided future plans, their or their mother's work schedule, and the non-return of questionnaires even after follow-up requests were made. The inquiry, therefore, is based solely on the input of qualified participants who were willing and able to share their experiences. The voluntary nature of this study may be the reason why only those who deemed themselves achievers participated. The participants were chosen based on the set criteria. Limiting the MSYA-participants to those who were single allows the research to be more forward-looking rather than reflective of what they planned and had already achieved. Data received from participants who were discovered to fall short of any criterion were excluded.

3.4 Data Analysis

Miles and Huberman (1994) framework for qualitative data analysis was used to identify descriptive and pattern codes. In finding descriptive and pattern codes for nurture, developmental provisions earlier categorized as financial resources, psychosocial support and cultural enrichment were found to fit Maslow's deficiency and growth motivations. Pattern codes were identified in the differences found in SES of the households during the MSYA's birth and at the time of the study. To determine the participants' socioeconomic status (SES), indicators for the MORES Socio-Economic Classification of Households (Virola, Addawe, & Querubin, 2007) were used. These indicators are the quality of neighborhood, home durability, indoor and outdoor quality of residence, occupation and educational attainment of household head, facilities in the home, and the monthly household income. Each indicator could be rated from 1 to 5, 1 being the lowest and 5 being the highest. The points are tallied and given the corresponding SES descriptor: AB (30-35 points); C1 or Upper C (25-29 points); C2 or Broad C (20-24 points); D (15-19 points); and E (7-14 points). The researcher assigned the code A for those who scored over 35 points since the maximum points possible is 40. The codes describe the standard of living each participant-pair had: AB represents the upper class, C the middle class, D the lower class, and E those who live below the poverty line. The MSYA-participants were asked to rate their SES twice – according to how they remember their status to have been from 0 to 6 years old, and then how they lived at the time of the interviews.

4. Results

To respond directly to the three research questions, three subheadings were chosen to (1) show convergences with the literature review, (2) describe the developmental provisions given to the MSYA, and (3) present how the

aspects of nurture were ranked by the mothers. Convergences in developmental provisions are discussed with the provisions given to the MSYA instead of under the first subheading.

4.1 Convergences Found in the Literature Review and the Participants' Experience

A. Mother's formal education and training influenced nurture

All mother-participants indicated that their formal education and training influenced the way they reared their children. Those who invested in their own career and advancement outside of the family had the ability and resources to provide enrichment programs; and they also had a budget for books, internet connection and gadgets, and/or travel within and out of the Philippines – be it with the children or independently. The MSYAs' parents made an effort to provide as much of their children's needs and wants as their time, budget and existing opportunities allowed. When one developmental need was not fully available, the parents would resort to making up for its scarcity; for example, in the case of lacking resources for art classes, parents relied on family friends in the said discipline to interact with the MSYA during social engagements.

B. The importance of prenatal care and good nutrition

The research found that all the mother-participants put a premium on the care they received during pregnancy and the medical care and nutrition given to their children in the early years.

Prenatal care - All mothers stated that they were in fairly good health when they became pregnant with the MSYA-participant. Only one mother (mother-participant 33) reported the need for bedrest at the latter part of the pregnancy, as she was 43 at the time and was diagnosed as a high risk case. Most of the mothers indicated that they received the utmost prenatal care from their chosen obstetrician-gynecologist during their pregnancy with the specific child involved in this research. As most of the MSYAs involved were highly anticipated births (32 of 34), the family's level of interest is evident in the fathers accompanying their wives to routine check-ups.

The mothers reported types of stimulation that they applied based on something they had read or heard about. Occurrences of talking (32), reading books (30), and playing music (29) to the unborn baby as forms of stimulation were reported. Another form of stimulation mentioned by the mother-participants (5 out of 34) was possible vicarious learning since they were fully engaged in academic work as they were attending University or were in residency training while pregnant. Two mothers stated that they did not do any form of prenatal stimulation, but they were in the group of five who were fully engaged in academic work and in residency training.

All the mothers ate healthily (i.e., fruits, milk, no caffeine, and minimal sweets), and consulted with a medical doctor, who prescribed daily iron supplements. They were well-aware of the dangers of smoking and alcohol consumption during pregnancy and avoided these at all costs. Mother-participant 23, who smoked and drank socially, mentioned that she stopped smoking and alcohol consumption upon learning that she was pregnant. The information gathered indicates that the mother-participants were aware of best practices in prenatal care, nutrition and child-rearing. They also ensured their infants' well-being by avoiding known hazards such as second-hand cigarette smoke, alcohol consumption, caffeine, and excessive stress.

Nutrition - In the review of literature, the nutrition of children from womb to the third year of life is crucial, as malnutrition during these years can lead to lifelong disadvantages, cognitive and otherwise. All of the mother-participants' responses affirmed the importance they gave to prenatal care and serving their children with healthy, nutritious food. They mentioned including fruits, vegetables, protein, milk, and daily vitamin supplements in their diets.

A number of studies point towards the rewards of breastfeeding in relation to the development of intelligence. Of the 34 participants, 11 mothers stated that they did not breastfeed and opted to use formula milk, while two did not have any responses to the item even when prodded. There were 21 mother-participants who breastfed with 13 exclusively breastfeeding and eight, mixed feeding. Reasons for stopping were varied. Topmost was that there was

not enough milk (7); followed by return to work (6), pain from teething (4), child preferred formula (2), subsequent pregnancy (1), and hospitalization of baby (1).

The data gathered show that majority of the mother-participants made an effort to follow the WHO's advisory that heralds breast milk as the best nutrition that can be given to an infant until it is six months old. When there was no option to breastfeed, the mothers ensured their children had high quality food, and included daily vitamin and mineral supplements. This implies that the mother-participants were well-aware of the importance of good nutrition in a person's life. For most parents, food intake was better controlled when MSYAs were younger, as food choices become more influenced by peers once children start school and build their own networks. Since malnutrition and PEM are said to affect the very young and the elderly the most, the rigid control over food choice may be relaxed during school years.

C. Family configuration

There are similarities between the participants' family configuration and Storfer's findings (1990). *Parental ages* were similar. The average age of mothers at the time of the MSYAs' births was 29.5 (median = 29), with the youngest being 20 and the oldest being 43; the fathers' average age was 32.6 (median = 33.5), with the youngest being 18 and the oldest being 54. In terms of *number of siblings*, all of the MSYA-participants had siblings. Most had two or three siblings (21), some of them had only one (7) while the rest had four or five (6). No pattern was seen in the extent of giftedness based on the *birth order* – eldest (14), second child (11), third child (7), and fourth child (2). The reasons for this could be similar to the exceptions found in the literature where extended family or community provides considerable assistance in infant care, or extraordinary attention is routinely paid to each new child since these apply in most Filipino families.

Effects of birth order were also not evident in the sample. The mother-participants' statements showed that parents were well-aware of the amount of time they could give to each of their children, stating that they had weekly "dates" with each child during their growing up years. In an explanation offered during the focus group discussion, it was articulated that the MSYAs were treated as children first with minimal regard given to the recognition of giftedness. As such, the MSYAs were allowed to explore interests that may not be associated to cognitive development, and were given more leeway to make mistakes and rectify them on their own. All their children, and not just the one identified as mentally superior, were made accountable for their actions and made aware of their responsibility in keeping one another safe.

4.2 Nature of Nurture Given to the Mentally Superior Young Adults

A. Deficiency motivation

Socioeconomic Status - Looking through the SES at the time of the MSYA's birth, it can be noted that even though most of them rated their SES to be C1 and C2, the participants' responses do not show financial resources to be top-of-mind; their answers imply that the families' basic needs were covered. Some interview responses indicated that the parents of the MSYA had their own parents and relatives to whom they could turn in times of need.

Table 1 shows that except for one family moving down one step from AB to C1 (pair #34), all families either maintained (14) or improved (19) their socioeconomic standing with one moving three steps upward from C2 to A (pair #1). The distribution across the socioeconomic classes at the time of MSYAs' births are: A (20.59%); AB (41.18%); C1 (29.41%); and C2 (8.82%) and at the time of the data collection: A (58.82%); AB (29.41%); and C1 (11.76%). Looking through the "at time of MYSA's birth" column, one could see that of the 34 pairs, 13 were from middle class households while 21 were from the upper class. At the time of the interviews, only three reported no change in their middle class SES (Pairs # 31, 32 and 33); 30 either maintained their upper class status (20) or moved from middle class to upper class (10).

Table 1

Socioeconomic Status of Participants (N=34)

Pair	At time of MSYA's birth	At time of interviews	Change in status
1	C_2	A	3
2	C_1	A	2
3	C_1	A	2
4	C_1	A	2
5	C_2	AB	2
6	C_2	AB	2
7	AB	A	1
8	AB	A	1
9	AB	A	1
10	AB	A	1
11	AB	A	1
12	AB	A	1
13	AB	A	1
14	AB	A	1
15	AB	A	1
16	C_1	AB	1
17	C_1	AB	1
18	C_1	AB	1
19	C_1	AB	1
20	A	A	0
21	A	A	0
22	A	A	0
23	A	A	0
24	A	A	0
25	A	A	0
26	A	A	0
27	AB	AB	0
28	AB	AB	0
29	AB	AB	0
30	AB	AB	0
31	C_1	C_1	0
32	C_1	C_1	0
33	C_1	C_1	0
34	AB	C_1	-1

Note. The column, "At time of MSYA's birth" shows the family's socioeconomic status indicated for when the MSYA-participant was born while the column "At time of interviews" shows the socioeconomic status indicated when first interviewed.

Of the 34 MSYAs, 20 were reported as not having left the parental home and had both parents living with them at the time of the interviews. Only six of the participants had temporarily left the home to live in a dormitory for either the duration of secondary and/or tertiary education but all six returned home. There were eight participants who confirmed not having both parents in the home due to death (1), separation of parents (4), parents having to work abroad at a certain point in time (3); with a ninth participant suggesting a strained marriage between his parents. Thirteen acknowledged the presence of strong ties with the extended family and community-based support through their religious practices.

B. Growth motivation

School selection and school-related expenses - The MSYA-participants echoed their mothers' high regard for both formal education and learning; expressing their desire to advance their knowledge and skills in their work and hobbies. The MSYAs' schools were chosen based on the institutions' standards, quality of education and reputation of the school alumni. Aside from school, the MSYAs were enrolled in enrichment programs in their particular areas of interest. Of the 34 MSYAs, 21 were in programs that catered to gifted students' needs in addition to their regular school work. The message of providing the best possible educational options to their children was clear. The mothers who participated in the focus group discussion stated that when they were searching for a school, they

took the following into consideration: (1) school reputation in connection with their graduates' reputation and set of values; (2) opportunities given by the school to further hone their students' skills in their chosen area of specialization, learn leadership skills, and perform and/or compete in their chosen field of study or activities; and (3) the presence of highly qualified teachers and counselors. The mothers considered mostly sectarian schools.

It bears reiterating that majority of the participants in this inquiry are in the upper class in terms of socioeconomic status, hence, not the typical Filipino family. As shown in Tolentino and Dullas (2015), there is a larger sector wherein financial support for basic needs is lacking, thus the need for children in the sector to work to supplement household income or support their own expenses. The MSYA-participants were not subject to such living conditions. The mother-participants emphasized their relief in being able to afford the schools of their choice. Nine out of 34 MSYAs mentioned receiving financial assistance in the form of scholarships from the government (6), their congregations (2) and relatives (1).

Opportunities to interact with family elders and extended family - When asked how the families taught their children about their culture, they specified that aside from being close to their families (Datu & Valdez, 2012), all of the MSYAs studied in Philippine schools. The school curriculum incorporates Filipino values (e.g., the use of Filipino courteous language characterized by the words "po" and "opo") and indigenous games, dances, songs, and folklore; and other traditions related to Filipino heritage. In the case of those with parents or grandparents who are not Filipino, cultural practices based on family heritage were learned through their family elders.

Nine of the 34 mothers reported not providing their children the opportunity to learn about their ancestral heritage from their grandparents and extended family. The others mentioned family gatherings, religious and spiritual rituals, and participation in outreach activities as avenues through which they were acculturated.

Enriching experiences - In the pursuit of developing their child's strengths and areas of interest, the mothers provided for enrichment programs, competitions and performances, hobbies and travel. Interests were varied, spanning both individual and team sports (martial arts, golf, gymnastics, softball), arts and design (e.g., sketching, painting, photography), and writing. Travel for MSYA-participants included visiting places in the three island groups of the Philippine archipelago – Luzon, Visayas and Mindanao. Since the participants reside in the National Capital Region, all MSYAs had traveled to parts of Luzon other than their hometowns, the most popular destination being the country's summer capital Baguio. Of the 34 MSYAs, three had never been to either Visayas or Mindanao. Seven had not traveled out of the country. Of those who had traveled abroad, the United States and Hong Kong were the places most travelled to, with a number of European and other Asian countries also named.

5. Discussion

There are factors noted in the literature reviewed, based largely on American data, that are also present in the Philippine data: the nativist perspective that the child's mental superiority seemed to be innate, Storfer's family configuration patterns (specifically in parental ages and child spacing), and the recognition of the role of environment in their selection of school programs, opportunities to interact with family elders and extended family, and enriching experiences. Notable was the pattern seen in the improvement of SES through the years. The awareness of the mother-participants of the need for prenatal care, good nutrition, and child-rearing practices concur with the findings discussed and recommendations in Clark's book (2012).

Other convergences found in literature review and the participants included the effect of maternal formal education and training on nurture and the emphasis on prenatal care and nutrition during the early years. The implications of women's attendance in school and their practice of a profession, and their probable impact on the early years are alluded to in recent literature reviewing progress towards the achievement of the United Nations' Millennium Development Goals, and the Education for All objectives (UNESCO, 2014, p. 22). It may seem that the first defense of a child would be a well-informed mother. Parenting classes, which have been limited in the Philippines due to Filipino parents relying on the extended family to guide them through the process, might be an area to explore especially in the context of the Senior High School.

The forms of prenatal stimulation used by the mother-participants were inexpensive. The activities named were part of their daily routines: the mothers ate healthily, stayed away from smoking and alcohol consumption, and were under the care of a medical doctor while they were pregnant with the MSYA-participant. The findings concur with the findings of Minaker and Hanning's (2002) study on who are most likely to breastfeed and follow recognized health authority advisories and practices. From the time the mothers gave birth, they adhered to advisories of recognized health authorities, following the six-month breastfeeding period unless there were factors that prevented them from doing so. Taking note of reasons stated for discontinuing breastfeeding could be a measure to encourage would-be mothers to choose to breastfeed.

The mother-participants used their educational background and training to decide on prenatal care and activities. They put a premium on education and their children's self-actualization. At the time of data gathering their marriages were intact; they also did not want for any basic need. This has implications for attendance of women in schools and the quality of health education and parenting programs.

Aspects of Maslow's deficiency and growth motivations were noted. In terms of deficiency motivation, basic needs were accorded attention and were provided for from the MSYAs' conception into their adult life. Due to the socioeconomic status of most participants, motivations for growth were high in both mothers and the mentally superior young adults. There were two trends in nurturance that stood out: there was an importance given to monitoring the quality of nutrition from prenatal care to early childhood years, and schools were selected based on their standard of education and the reputation of their graduates and of the schools themselves.

The nurturance provided to the mentally superior young adults in the form of deficiency and growth motivations debunk beliefs that those considered gifted do not need help; that they will do fine on their own. This has implications on their identification and nurturance. As a first step, in line with McBee's (2006) finding of the value of teacher referrals specifically to eliminate the source of underrepresentation of minority and low-SES students in gifted programs, Philippine educators must be trained in the referral process to allow more students to be identified as gifted. These referrals can be acted upon by guidance counsellors, psychometricians and psychologists. Once identified, a student can go through the process of talent development to ensure that his potential is reached. The Implementing Rules and Regulations of Republic Act No. 10533, the Enhanced Basic Education Act of 2013, calls for comprehensive programs for the gifted and talented. As the provision defines programs to be comprehensive, an interdisciplinary approach to both identification and development of this sector may be beneficial.

6. Conclusion

In general, the backgrounds and characteristics of the Philippine MSYAs and their families were very similar to those identified in the studies of their North American counterparts. Nevertheless, some traits may be more characteristically Filipino among the MYSA-participants and their families: the "nativist" view of gifts and talents some of them held, the need to augment resources with ones that can be given by those surrounding them, and the importance given to the cultural imperatives such as appropriate use of respect language, and interaction with the extended family.

As earlier stated, the families of the 34 Filipino mother-child pairs who participated do not represent the average Filipino family due to a difference in socio-economic status; theirs reflecting a lifestyle enjoyed by only 10-15% of Filipinos. It should be noted though that much can be culled from the literature in order to better inform the basic institutions of society so that they can work collaboratively on improving child-rearing practices in the Philippines.

Further study into how those in a different socioeconomic class compare with both primary and secondary findings of this research would be illuminating and instructive. Query into the extent of government support to augment what those in the low-SES levels lack may be an important aspect to examine current programs for the gifted and talented.

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