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Understanding of Essential Quotients: Implication to Nursing Education and Practice

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Abstract

Human behavior is influenced by two major factors, which are nature and nurture. Socialization or nurture has profound influence on the natural qualities of an individual's characteristics. Education on the other as agent of socialization help to determine these essential specific human qualities so as to develop, nurture and build each of these innate potentials to enable each individual to function maximally in life. Each human person is born with his/her individual characteristics or potentials which can be evaluated by psychologist devices, to an extent. The measure of the degree of these specific human characteristic is described as Essential Quotients. Essential quotient distinguishes one individual from the other and presently include: Intelligence, Emotional, Social, Adversity, Spiritual, Cognitive, Creative, Experience, Vision and the most recently coined Genius Quotients. Discovery and development of these characters in each individual is critical for personal achievements, business growth, and general wellbeing of the society. Good understanding of them is therefore of paramount importance for nurses as educators who trains, nurtures, mentors and student nurses to become professional nurses. In the past, educationist emphasized more on IQ, but as health care needs expands and people continue to be informed, there is need to touch-light the necessity of parading shift from only intelligence quotients to other essential quotient that nurses require to enhance the IQ and enable the would-be nurse to perform competently in the present day dynamic world.

KEY WORDS:

Essential Quotients, Implication to Nursing Education and Practice Understanding

Introduction

Naturally, human behavior is influenced by multiple variables, mostly by hereditary and environmental influences. According to Sindi (2023), apart from individual's hereditary or genetic endowments, differences in the environment where an individual is raised up produce an enormous variation of individual differences. Individual differences have always played in the mind of the professional Nurse in both education and giving nursing care services (Singh & Sharma; 2017). The genetic potentials or inherited make-up of an individual is what the psychologist refer to as essential quotients (Gardner; 2011) These inherited endowment lays down the basic framework of personality and may set down certain limits for its subsequent development. However, environmental experiences continually build up on these frameworks, deciding the degree to which the inherited capacities will or will not develop as well as the particular direction they will take, (McGhie 2020). According to Gardner (2011), much as essential quotients are innate in man, they can as well be acquired and developed through training and practice.

Discovery of essential quotients evolved as science and technology improves (Mattiske; 2022). Current discovered essential quotients include: Intelligence Quotients (IQ), Emotional Quotients (EQ), Social Quotients (SQ), Adversity Quotients (AQ), Spiritual Quotients, Creative Quotients (CQ), Experience Quotients (XQ), Vision Quotients (VQ), Cognitive Quotients (CQ), and the most recently discovered Genius Quotients (GQ). Sindi (2023) asserted that all the essential quotients are critical for personal growth and achievements, and are capable of building and maintaining relationships, stable personalities and better egalitarian society. Until recently, only one essential quotient has always been stressed upon in educational assessment, which is the Intelligence quotients. Smelter *et.al.*(2016), stated that Intelligence Quotients(IQ) refers to the measure of an individual's ability to recognize and solve problems, and that teachers often times pay higher attention to developing the intelligence quotients of their students, while overlooking the other aspects of personal developments. But Bombora (2023) argued that it is equally important to consider other skills that are required and other abilities necessary for achievements and success in life in the process of educational preparation of students. Additionally, other essential quotients exist such as Physical Quotients (PQ), Emotional Quotients (EQ) which measures emotional intelligence, self-awareness and emotional self-control, and



can assist an individual to identify underlying emotions in themselves and others, (Sindi:2023). Also Social Quotients (SQ) determines cultural fit and social awareness, while Adversity Quotients (AQ) measures the ability of an individual to face and overcome difficult challenges and problems. Spiritual Quotients, according to Mattiske (2022) determines an individual's ability to tap into his/her spiritual side with conscience of good and evil, with some people being more spiritually connected than others. Furthermore, Creative Quotients (CQ) measures an individual's ability to approach issues while connecting them to different ideas, thoughts, and imaginations to improve or form new different concepts, while Vision Quotients (VQ) has to do with the individual's ability to predict and exploit future trends by bridging gaps in current state toward desirable future state.

Similarly, Experience Quotients (XQ) measures the ability to understand business terrain and customers' aspirations and provide impactful and satisfying valuable customer services that yields increase patronage of goods and services provided, while Cognitive Quotients (CQ) measures how an individual can utilize his/her intellectual skills to approach projects and solution to problems. Genius Quotients(GQ) on the other hand measures an individual's preference for learning and communication with others (Dani; 2023. Morin:2020, Mattsike; 2023 & Sindi; 2024).

Although intelligence quotient which is the first ever discovered quotient play crucial role in problem solving and general knowledge, it is also important to recognize that other essential quotients help individuals to navigate through life towards success and fulfilment. This paper therefore deems it necessary to highlight on these other essential quotients to update educators of the need to understand the concept of essential quotients and endeavor to always have a holistic approach to education and preparation of the students for total personal and social development required to navigate through the maze of life ahead in a dynamic world.

Concept of Essential Quotients

Quotients refers to the degree or amount of specified quality or characteristics of a thing. (Boaz and Fox; 2014). The word quotient was coined from the Latin word 'Quotients' which means how many times or how often. It is a psychologist metric measure of innate human abilities that can be developed and maintained, which are essential for maximal human functioning. It is described as essential because they are needed to survive and excel in life's endeavors. According to Gardner (2011), Every human being has unique strength and natural abilities which distinguish one person from another. One individual for instance may be book smart, but may be poor in the use of common sense to solve problems. Similarly, another person may be intelligent emotionally and poor in cognitive aspect. The fact that one person is book smart and the other emotionally smarter should not therefore be used as a yard stick to judge one person superior or inferior to the other person. Incidentally, over the years, most academic institutions have placed much emphasis on developing student's intelligence quotient and cognitive abilities by only making them to memorize sentences, analyze mathematical problems, identify facts and a lot more, but pay very little or no attention to the other essential abilities that are necessary to facilitate the utilization of the intelligence quotients. Inability to fully incorporate the development of these other aspects of human innate abilities, can result to bringing up individuals with good educational and certificate grades but who cannot fit in and adapt to dynamic situations in life. Sometimes this lapse may result to human- in-balance, and misplaced priorities, which may lead to resorting to substance use or abuse to meet up with life realities, which further in turn affects both academic and other life pursuits negatively.

Furthermore, both educators and parents often assess and judge students only on the merit of cognition intelligence alone (IQ) and so those who are unable to meet-up with that standard are regarded as 'drop-outs or failures'. There is need therefore to reemphasize drawing attention to all the essential quotients so as to enlighten every individual student to develop their own quotient as they are endowed with have the feeling of inferiority or superiority complexes. Every ability is important in its own regard. For the purpose of enlightenment each of these essential quotient shall be highlighted.

Intelligent Quotient (IQ)

Intelligent Quotient (IQ) describes how an individual recognize and solve problems (Mattriske; 2023). The word intelligence is coined from Latin word which means 'choosing between. IQ measures an individual's ability to use cognitive skills. Gardener (2011), defined intelligent quotient as uniform cognitive capacity that are innate and can be measured by IQ tests. IQ encompass relative abilities such as abstract thinking capacities, understanding abilities, reasoning (inductive and deductive reasoning), learning, planning and problem solving. It is the first and well known human ability, which is symbolically associated with thinking skills and which distinguishes an individual from another. According to Isabu (2023) it include ability to learn from past experience, using meta cognitive process to enhance learning and ability to adapt to the surrounding environment. Intelligent quotient may require different adaptation within different social and cultural context, in the which intelligence varies. In the course of study of IQ, psychologist Gardner (2011) proposed multiple intelligence theory which



explained that IQ comprise of multiple independent constructs and not just a single unitary construct. He identified nine multiple intelligences as:

- Naturalistic intelligence, which as to do with the understanding and interaction with the natural world,
- Linguistic intelligence refers to the ability of reading, writing, learning and use of language as well as communication skills.
- Interpersonal intelligence describes the ability of an individual to relate with others well, forming and managing relationships. It enables a person to be sensitive towards others' mood, feelings, temperament, motivations and ability to cooperate as a team member. Interpersonal intelligence encompasses: empathy, social awareness, communication skills such as body language and facial expression, adaptability and team work.
- Intrapersonal intelligence has to do with an individual's understanding of own emotions, motivations and goals in life. It is the ability to understand and appreciate one's innermost feelings. It is the ability to be sensitive in understanding one's mood, emotions that emerges within self and realization of changes that occur within self both physically and psychologically Gardner (2011).
- Logical-mathematical intelligence describes ability of reasoning, analyzing problems-solving and critical thinking.
- Spatial intelligence describes ability of visualizing distance, depth, area and space
- Body-kinesthetic intelligence has to do with the ability to manipulate objects and use of physical skills. It involves a sense of timing, and perfection of skills through mind-body union and having good physical coordination and movements. Artists, dancers, and Surgeons exhibits well-developed bodily kinesthetic intelligence.
- Musical intelligence refers to ability of understanding, creating and performing music.
- Existential intelligence refers to the ability to tackle and answer deep questions as human existence and evolutions.

According to Gardner (2011), everyone is born with variety degree of each of these types of intelligence, however its manifestations depends on development and use.

Physical Quotients (PQ)

Physical Quotients has to do with an individual's physical self-awareness. It is a function of how well one is attuned to his/her physical well-being, involving how a person treats his/her mind, body and spirit. It has to do with an individual knowing what is good for him/her. Buzan (2003) asserted that the way an individual carries him/herself and I able to perform to the best potential is a product of physical quotients. Physical quotient, though inherent to man can be developed and be built on maximally or can be neglected and be lost. It consists of consciousness of one's overall physical fitness, balance, agility, co-ordination, anticipation, reaction time, strength, flexibility and aerobic fitness. It is by socialization and training oneself to be physically intelligent that one can become physically coordinated, balance and poised. Physical quotient is therefore the fundamental element on which a balanced life can be attained, in that if an individual lacks Physical intelligence, it may affect other human functioning and performance negatively.

Emotional Quotient (EQ)

Emotional Quotient (EQ) or emotional intelligence is the ability to perceive, control, and manage one's emotion effectively and appropriately in different situations. Emotional intelligence includes self-awareness and management, emotional self-regulation and control relationship management (Mei; 2024). Emotional self-awareness can help an individual to adapt to changes and remain positive. (developmental changes, and socio-economics variation). EQ can actually assist a person to identify understanding of emotions in both self and others and be able to recognize the relationship between emotions and life's realities. It informs a person's ability to empathize, demonstrate understanding of situations by taking into consideration the way other people may feel. EQ help people to curb selfishness, ego-centricism, greed, covetousness and associated tragedies (Nwadinigwe *et.al.*; 2012). It refers to how people handle their emotions and feelings while interacting with others. Emotional intelligence includes how well a person can control the different emotions he/she may experience in adverse situations of life. Such emotions as stressful conditions of losses, failures, disappointments, frustrations, provocations and anger. According to Segal, *et.al.* (2024). EQ can affect physical health, mental health and overall performance and can be developed at any stage in life.

Signs of Emotional Quotient

According to Mei (2024) signs of EQ include taking responsibility for action and inaction, ability to adapt easily, demonstrate courage even in failure, perceives failures as opportunity to reinforce for better success ahead, ability to admit fault without apportioning blames, but rather seek for way(s) out, able to identify better ways solving problems for future use, ability to accept constructive criticism with threats and ability to control temper when wrongfully accused or criticized.

Adversity Quotient (AQ)



Adversity quotient describes the resilience ability of a person when faced with difficult situations. According to Singh and Sharma (2017), AQ can be determined by observing how people react and respond to daily challenges and problems and taking or avoiding difficult issues. According to Naidu (2023), it is the measure of one's ability to go through a rough path in life and come out without losing one's mind. It is an indicator of a person's success in life and also help to predict attitude, mental stress, perseverance and longevity. Some people have higher AQ than others probably due to their DNA, life experience or environmental factors. According to Singh and Sharma (2017), an individual with AQ exhibits exceptional problem-solving skills, emotional intelligence and the capacity to bounce from setbacks.

Social Quotient (SQ)

Social quotient or social determines cultural fit and social awareness. It helps to determine an individual's ability to work across different cultures and willingness to accommodate other people, tribes, race, nationality and religion. Jain (2020) pointed out that individuals with high social skill will be able to do the following:

- Identify unassigned but needful roles in the family, school and work place and do it to the benefit all concerned
- Identifies leaders, influencers and followers
- Understands power dynamics and strength of communication skills
- Distinguishes underlying and unwritten social roles and codes.

Signs of Social Quotient

Morin (2020) listed the signs of social quotient as follows:

- Ability to interact and connect with people in both verbal and non-verbal ways
- Ability to use small and unseeingly insignificant body clue to understand people's behavior and tendencies
- Presenting oneself as teachable and open to corrections
- Ability to influence available social situations to meet important group goals.

Cognitive Quotient (CQ)

Cognitive Quotient is an indicator of the way an individual apply inherited and acquired intelligence and knowledge to prevailing circumstances and situations. It encompasses application of problem solving skill to solve problems, calculated approach to conflict resolutions, ability to view problems from different varied perspectives. According to Sindi (2023), people with high CQ take initiative and can work independently. They are not 'push and start' like those wait to be ordered about by their leaders in order to carry out needed assignment. They need not wait for leader's instruction to make right decisions, rather they are apt to use discretion as the need arise. Such persons will always perform their roles well to benefit everyone around them that are involved. CQ can be demonstrated in: professional behavior, communication style, talent display and approach to projects/problem solving.

Spiritual Quotient (SQ)

Spiritual Quotient or spiritual intelligence describes the ability to tap into one's spiritual side and behave with wisdom and compassion, while maintaining inner and outer peace. Mattiske (2022) explained that spiritual intelligence is the central and most fundamental of all intelligences, because it serves as the source of guidance for others. SQ though among the newest discovered intelligence is fast gaining popularity because of its application in everyday life. It guides and provide answer to what is good and evil. Spiritual Quotient comprise of the following 1. The capacity to transcend the physical and material world, 2. The ability to experience heightened state of consciousness, 3. The ability to sanctify everyday experience. 4. The ability to utilize spiritual resources to solve problem.

Creativity Quotient (CQ)

Creativity quotient has to do with ideation and fluency to determine the level of creativity a person have. It has to do with people's approaches while connecting different ideas. The Nursing profession is an art and science apply to meet the care needs of individual, families and the society in variety of settings. Creativity intelligence will enable the would-be Nurse to utilize synthesized ideas to give individualized care across cultures, religion and race. This can enable the trained nurse in one nation to work and fit in any other place in the globe, (Sindi; 2023).

Vision Quotient (VQ)

Vision intelligence is the ability to predict and foretell future trend of events on the premises of current happening. It helps an individual to forecast future and make necessary plan for required adjustment to continue functioning maximally. Wayne (2010) pointed out that for most people, having a vision and being visionary is a learned skill, even though it is innate in everyone



Experience Quotient (XQ)

Experience Quotient or experience intelligence is an indicator of the ability to understand business terrain and customers' expectations. It entails the ability to supply the required skills to meet the desired outcome and create new values. According to May (2024) XQ has been used in business for elevating customers and staff experiences through strategic innovations, fostering deep connections and memorable interaction, driving sustainable business success with impactful, lasting impression that bring about business success and concern with fulfillment and self-actualization.

Genius Quotient (GQ)

Genius Quotient is one of the most recently coined by Catherine Mattiske in 2021. It is an indicator of an individual's preference for learning and communication with others.

Implication for Nursing Education and Practice

Globally, evolution of science and technology have their toll on almost every endeavors of humanity. In modern world, education is getting widened and there is cut throat competitions among students to excel. The application of knowledge of essential quotients in assessing and judging student's performance and success has become necessary in their education and formal preparation for career and future life. In Nursing education, the would-be professional nurses require not only high intelligent quotient to excel academically but also physical quotient for positive self-image and poise, necessary to gain clients confidence and cooperation to accept care. They also require to develop emotional intelligence as to understand both own emotion and that of other people, to be able to show sensitivity to health needs and empathize with those in need of health care and services. Adversity intelligence is needed as to be able to handle the stress associated with nursing education and services with perseverance and not to breakdown, physically or emotionally.

Development of social intelligence, will enable the would-be nurse to relate well with colleagues, medical team members, as well as clients of care and their relatives in order to render maximum competent care. Cognitive intelligence is required for critical thinking which is necessary for decision making of client's care and well-being. Spiritual intelligence is necessary for upholding moral values and maintenance of ethical standard of care for positive health care outcome. Creativity intelligence is also needed to deliver variety of care in a dynamic society, while experience intelligence is needed to excel in the career as a nurse as well as to enable conscious individualized client's care that give satisfaction and enhance value for health care. It is therefore important for educators to be conscious of the need to prepare the students in these regards and extend attention to discovering and helping to train and build on these other potential in multi-dimensions and in totality of the formation of the would-be professional nurses to serve in egalitarian society.

Summary

The paper highlighted various aspects of quotients or human intelligence and defined it as test values indicating human innate potentials which can be identified, developed and utilized to navigate through life successfully. According to the narrative, the psychologist discovery of these potential started with intelligent quotient (IQ) which has been popularly use for assessment both in academic, job performance and rating of achievements until others were coined out and continues to expound to the most recent one which is Genius Quotient (GQ). According to Mei (2024), while the understanding of intelligent quotient is essential, the other quotients help to identify other vital details add more meaning to IQ. These include physical quotient (maintaining a healthy body), emotional quotient (self-awareness and emotional control), social quotient (cultural fit and social awareness), adversity quotient (ability of perseverance), cognitive quotient (ability to utilize intelligence), vision quotient (), creativity quotient (ability to connect different ideas to make new thing or modify existing ones), spiritual quotients (right conscience for good and evil), experience quotients or intelligence (business smart and successful entrepreneurship). Nursing education should aim to take cognizance of each of the quotients to integrate, identify, and help students to develop theirs individually and peculiarly in order to produce would-be nurses that are physically, socially, emotionally, spiritually, and mentally sound to deliver competent care in variety of settings.

Conclusion

Having highlighted the nine essential quotients and their contributions in building formidable personality in the students and nurses in particular, it is noteworthy to conclude that the nurse educator should consider including assessing students on these multiple quotients rather than judging them only on the intelligent quotient alone. Attention should also be drawn to the fact that a student nurse could demonstrate high intelligence and be book smart but may not be a good nurse after all, that can give competent nursing care to those in need of the care.



Suggestions

1. The modalities for enabling student nurses to identify their individual potential for development should be included in both curricular and extra-curricular design of the training programs.
2. The Nurse educators need to be trained to vary their methods of education and instructional materials to accommodate the development of the essential quotients in individual students.
3. Methods of assessing academic performance should shift concentrated emphasis to only intelligence quotients to also include methods of assessing other essential quotients in a holistic manner, the Nursing and Midwifery Council of Nigeria has been trying to gear training of student nurses towards these directions before now, yet there is need for more to be done to catch-up with the required competence in nursing practice as necessary for present day dynamic society.

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