Emotional Intelligence and Productive Relationships with Patients and Colleagues

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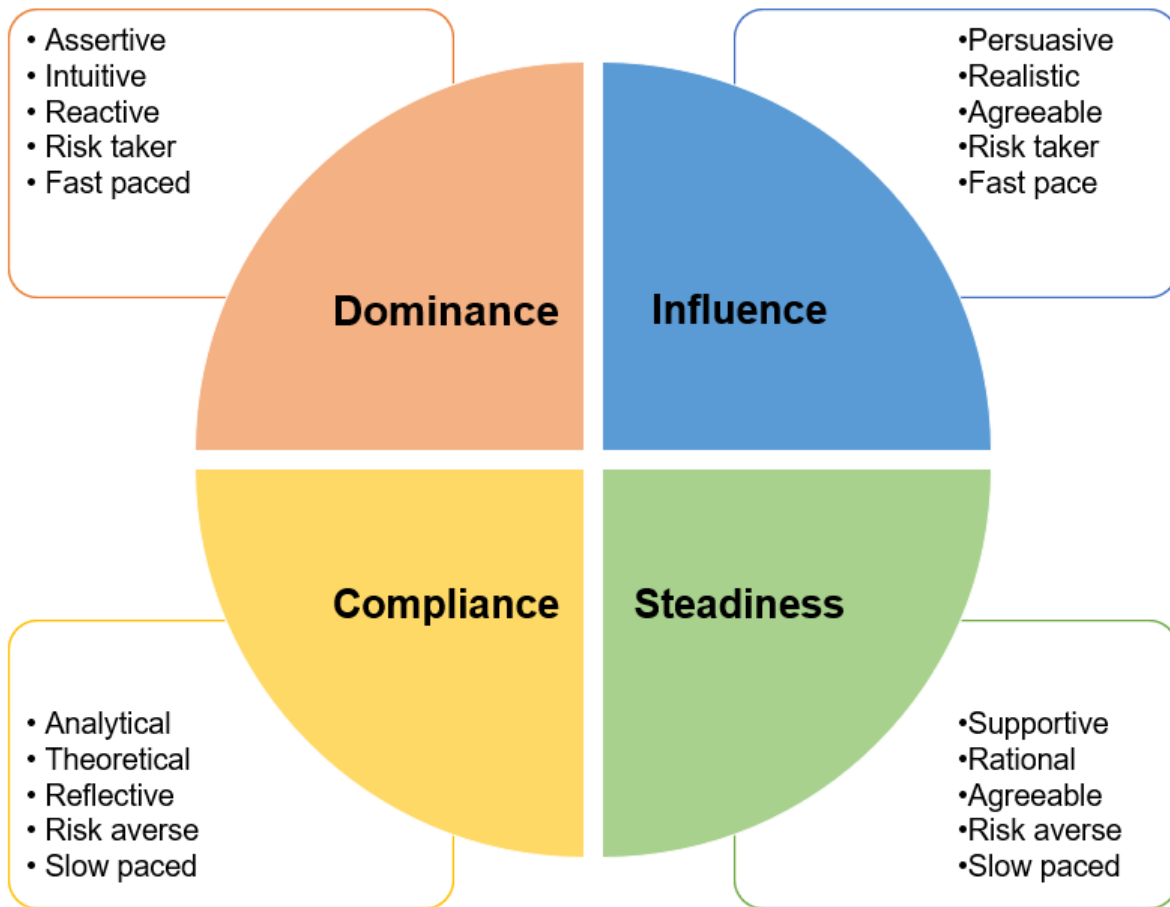[2]Charles Sturt University, Wagga Wagga, Australia

Declarations

Graphical Abstract

- Assertive
- Intuitive
- Reactive
- Risk taker
- Fast paced

Dominance

Influence

- Persuasive
- Realistic
- Agreeable
- Risk taker
- Fast pace

- Analytical
- Theoretical
- Reflective
- Risk averse
- Slow paced

Compliance

Steadiness

- Supportive
- Rational
- Agreeable
- Risk averse
- Slow paced

Abstract

A higher degree of *emotional intelligence* among health professionals has been shown to result in better patient care and improved wellbeing of the health professional. For nuclear medicine, emotional competence of staff and emotional proficiency of institutions, are important expectations. Nonetheless, there is a paucity of material outlining purposeful honing of emotional intelligence, or the tools for such development, across the literature. While the hidden curriculum provides powerful and authentic educational opportunities, incidental or accidental (organic) capability development does not benefit overall professionalism. Deliberate curricula can be achieved through a scaffold of emotional training and immersion programs that allow the nuclear medicine student or practitioner to recognize and foster *emotionally safe* environments. This requires careful planning to drive the *emotional intelligence pipeline*. Central to this is an understanding of learning taxonomies. There remain substantial gaps between the most and least emotionally insightful that could be addressed by rich immersive activities targeting emotional proficiency among students and the graduate workforce.

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Introduction

When the interaction between health professionals and patients is positive, compliance, satisfaction and outcomes improve for the patient, and clinical decisions and leadership are enhanced for the health professional (*1-3*). Importantly, a higher degree of *emotional intelligence* among health professionals has been shown to result in better patient care and improved wellbeing of the health professional (*4*). Interestingly, one study used an emotional intelligence inventory to report the highest emotional intelligence among mammographers and the lowest among nuclear medicine technologists among nearly 2000 diagnostic radiography workers (*5*).

Emotional intelligence is the acuity of ones own and of others emotions, and using this to shape actions, guide attention, and focus motivations with the view of producing more productive interactions (*6*). There are four general aspects of emotional intelligence (*6*). The emotions need to be expressed, the emotions need to be contextualized, the emotions need to be understood, and finally, emotions need to be controlled (*6*). Generally scores for emotional intelligence will be expressed from a global context (overall emotional intelligence) and then from sub-categories that include emotionality, sociability, self-control and wellbeing. In the often-stressful healthcare setting, emotional intelligence among health professions affords *situational awareness* and the ability to modify interactions to produce more *emotionally safe* environments for colleagues, self and patients. In turn, this produces more productive, more effective and more satisfying interactions. Central to developing emotional intelligence capability is a rich understanding of and interplay between personality traits; ones own and those of others. It is also important to recognize that emotional intelligence can be associated with intuitive or organic aptitude but can be learned, honed and engineered for purpose.

There is a comprehensive inventory of tools and battery of techniques to hone one's emotional intelligence. These range from mindfulness or meditation exercises through to purpose-built training programs. Here, enriching understanding of individual personality traits and the dynamic between interacting individuals will be explored as one such tool and technique aimed at providing higher order *emotional taxonomies*. Central to capability

building in emotional intelligence and unpacking *personality traits* is the capability of health professions to be critically and deeply reflective. Despite the value and importance, there is a paucity of literature providing insights into educational initiatives to develop foundations of emotional intelligence among health professionals, including undergraduate nuclear medicine students.

Streamlined Personality Inventory

Generally, personality refers to the characteristics or traits that an individual exhibits when interacting with others (*7*). Health professionals, like those in nuclear medicine, interact with patients and colleagues on the basis of spontaneous and unconscious impressions of personality. Clearly these impressions rely on intuition, lack context and may lack insight; especially when made under stress (observer or the observed). Indeed, bias and prejudice are likely to confound these interpretations and interactions. For some, informal or formal learning associated with psychology might afford improved accuracy and outcomes. Nonetheless, there remains a paucity of formal training and structured experience in understanding personality and applying such insights with emotional intelligence to produce positive relationships and effective conflict resolution. Confounding attempts to develop emotional intelligence are a wide variety of models for classifying personality, varying degrees of complexity of the same, and contradiction among the models. Furthermore, interactions with patients and colleagues might be fleeting, affording little chance for rigorous baseline and trait evaluation. The application of the science associated with personality psychology does not fit the fluid environment in which potential benefits could be produced.

There is a requirement, therefore, to develop an intuitive model that requires a foundation of theoretical insight applied in the dynamic environment. Personality traits and sub-traits are complex and a usable model requires simplification without losing accuracy. There needs to be recognition that any individual may have a mix of personality traits that may change weighting in different situations. The value of honing both the science and the art of emotional intelligence is that *emotional competence* improves the interactions with patients and colleagues which is vitally important in a patient-facing, personalized

medicine environment. While these insights do not allow changing of the personalities of others, emotional intelligence allows health professionals to adjust patient care or communication to better fit the individual patient – personalized care. In a study of women with breast cancer, investigators showed that understanding patient personality traits allowed more appropriate patient care and interventions (*8*). Emotional intelligence might be thought of as the capability to use casual impressions to objectively predict traits to inform adjustments to communication in real-time while being conscious of the nuances associated with personality, the lack of detailed evaluation inventory (e.g. validated question bank), and the potential for a wide variety of biases.

Application of emotional intelligence training and providing students or practitioners with a framework for real-time personality trait assessment needs context. Importantly, these simplified tools vary substantially with intuition and experience, and assume the absence of personality disorders. Furthermore, manifestation of personality traits and behaviors will vary with increasing levels of stress for both patients and colleagues (e.g. patient is confronting serious illness). Finally, the health professional observing, or the patient or colleague being observed, can be functioning in varying levels of *emotional intensity* (magnitude with which emotions are experienced or felt), *emotional flux* (frequency with which different emotions are experienced or felt), and *emotional density* (concentration of different emotional stimuli in the environment), or could be confronting *emotional exhaustion* (burnout); all of which influence the *emotional acuity*.

There are a number of well recognized compact inventories for personality evaluation. At a very rudimentary level, a two-trait approach might classify individuals as introverts or extroverts. The big 5 using the OCEAN acronym is also common and classifies individuals as open, conscientious, extravert, agreeable and neurotic (*9*). A variation on this model adds honesty as a sixth trait and modifies neurotic to emotional (HEXACO) with 'X' representing extrovert. A very useful four-trait model using the acronym DISC classifies individuals as a mix of dominant, influence, steadiness and compliance. The DISC model will be discussed in more detail below.

Emotional Intelligence Pipeline

There are similarities between the *emotional intelligence pipeline* and the cultural proficiency pipeline previously reported (*10*). At the foundation of patient care and inter-professional relationships is emotional safety. Patients and staff value emotionally safe places characterized by respect. To provide an emotionally safe environment requires more than emotional knowledge and awareness, it demands emotional intelligence through engagement with values and attitudes (figure 1). Part of emotional safety in nuclear medicine is related to health professional education. The unequal power relationships between health practitioners and patients, and among colleagues, contributes to *communication asymmetry*.

Broadly, *emotional competence* is the capacity to respond to variations in emotional needs, values, styles and circumstances. This includes understanding and respecting variations in individual beliefs, values, preferences, behaviors, thresholds of tolerance and resilience, expectations, compliance, and attitudes. Emotional competence is an important strategy for addressing communication asymmetry and potential conflict for patients and colleagues, but requires more than *emotional awareness*. Emotional competence are the attitudes and behaviors, reinforced through policy and practice, that enable effective productive relationships and effective communication among individuals.

Success in building an emotionally competent health workforce is constrained by a lack of consistent definition and language around emotional competence, and lack of evidence of training impact or appropriate performance indicators. Emotional competence requires mastery of the capacity for self-assessment, critical reflection, management of *emotional dynamics*, emotional knowledge, adaptation of actions, recognition of *emotional differences* and understanding the impact difference makes. Recognizing emotional difference and understanding the value that those differences bring to interactions is an important part of emotional competence (figure 1). This quality allows easy demarcation from lower levels of emotional development where differences might be seen as opportunity for exploitation (e.g. bullying), or be inappropriately responded to. *Emotional proficiency* demands the same capabilities at individual and institutional levels but also

requires capacity for *emotional humility*. Beyond the capabilities of emotional competence, emotional proficiency recognizes differences and is equipped to respond effectively and affirmingly; individually and institutionally (figure 1).

Emotional Intelligence Training

There have been initiatives using stand-alone emotional intelligence workshops for health care workers and students which may be seen to satisfy human resource driven performance metrics to build emotional awareness. More effective programs might develop stronger insights through rich and deep understanding. The journey through emotional awareness to emotional competence or proficiency requires more structured and deliberate learning. Relying on organic development of emotional intelligence among students as they progress through their studies and training has been shown in radiography students to fail, with no difference in emotional intelligence metrics among students followed across three years of study at multiple institutions (*11*). At Charles Sturt University, undergraduate nuclear medicine students are provided a preliminary workshop creating awareness and understanding associated with emotional competence. The knowledge is enriched with immersive exercises that are linked to reflective tasks to connect the learning with experience. Students are then released into the clinical environment where further application and reflection are used to hone emotional intelligence.

The journey for students and health professionals to cultural competence is richer through cultural immersion style learning but also relies on appropriate learning taxonomies. Both undergraduate and continuing education training programs across a wide array of topics adopt a cognitive focus. Bloom's cognitive taxonomies are effective to scaffold the learning at lower order capabilities like knowing and understanding. Progression to emotional acuity and emotional safety requires attention on the affective domain of Bloom's taxonomy where feelings, attitudes and values are scaffolded. The step to emotional competence and proficiency requires command of the capabilities of Blooms taxonomies in the psychomotor domain. Here, the emphasis is on behaviors, skills and actions (figure 1).

The Charles Sturt University Experience

At Charles Sturt University, nuclear medicine students participate in workshops that build emotional intelligence and capabilities using the DISC four-trait model (*12*). DISC is an acronym for dominance, influence, steadiness and compliance although the S has also been reported as social and submission. Classification relies of behavior around risk, pace, focus, self and response among others. While very useful as a real-time tool, experience suggests that the language introduces bias. Dominance is often viewed as a negative trait and there is frequently, among students, an inclination to deny having a high degree of dominance as a trait. Indeed, dominance can be associated with bullying and rudeness but it can also produce leadership and decision making beyond the other three traits. Conversely, influence is often seen positively as having impact on others and students eager to associate themselves with this trait without considering the deeper meaning. Often students take offence to being classified as steadiness or compliance; seemingly implying a boring personality. It is only with deeper immersion in the Charles Sturt University workshop that students appreciate the strengths and weaknesses of each trait, and the complex interplay and balance of traits each individual exhibits.

The foundation of the Charles Sturt University emotional intelligence program is knowledge development where students learn the theory associated with both emotional intelligence and personality trait assessment. This is delivered at Charles Sturt University via a tutorial and really represents the cognitive portion of the taxonomies. Scaffolded to the knowledge is the development of values and acuity which is undertaken in two phases, the first a workshop and the second via authentic clinical experience with reflection. The ongoing application of the knowledge and skills in the clinical environment, especially during final year clinical placement and early years as a qualified practitioner, lead to (for some graduates) emotional competence. Emotional proficiency is modelled in the hidden curriculum throughout the course at Charles Sturt University and reflects institutional emotional proficiency.

The DISC program delivered at Charles Sturt University is not a detailed personality tool but rather provides insight into individual styles to allow prediction of behaviors and an

individual's (including self) general approach using an accessible and easily interpreted model. Nonetheless, DISC does not reflect knowledge, skills or intelligence. There are a diverse array of applications of the skills and capabilities developed in this program. From a student context, including shortly after graduation, it can be used to improve the interactions with colleagues and patients to produce more productive outcomes and in doing so, becomes a powerful career development tool. Charles Sturt University students also use the DISC program to enrich self-awareness and to manage conflict or difficult personalities. This is especially powerful for students or junior staff navigating stressful or hostile clinical environments where they may feel disempowered at the lower end of the hierarchy. In recent research among student diagnostic radiographers, 21% indicated the clinical environment negatively impacted their wellbeing associated with emotionally challenging situations (*13*). Within the clinical dynamic, these tools can be used for conflict resolution, avoiding conflict, producing productive teams and driving staff morale. Leadership and management can adopt these same tools to recruit the right staff members that will assimilate best into the established workforce and environment, to drive cultural integration, inform performance management, and to redeploy staff where necessary.

Students are challenged to see the advantage in modifying one's own behaviors to optimize interactions with others. Nonetheless, it is not immediately apparent that a given individual has the range of behaviors to cope with the complexity and variability of patient and colleague interactions. Prior to breaking down the characteristics of each of the four DISC traits, recognition should be made that no trait is better or worse than others, that we all have a mix of all four traits, that most of us have 1-2 traits that predominate, the trait predominance can change with environments, and there is a large range of sub-traits to consider. For example, in the absence of a dominant 'I' in a working environment, a typical 'S' may morph into an I in that environment. Similarly, a 'C' may manifest their inner 'D' in the absence of a 'D' in their working environment.

Dominance is associated with assertiveness, control and power. The typical 'D' wants to be in charge and have the authority to make decisions. They are task focused and results

focused. Decision making is quick and decisive. A 'D' enjoys change and challenges. They can, however, be over-bearing, too ambitious, very competitive, skeptical and suspicious, aggressive particularly when targeting a goal, and lack emotion. Harnessed appropriately, a 'D' can be a good leader and decision maker that thrives in challenging environments but they do not consider consequences (including human) before actions. The typical 'D' is expressive and extraverted which can produce communication challenges. Communication lacks detail, is instructive and can be uncontrolled. When interacting with a 'D' (patient or colleague), focus on results, avoid detailed explanation and focus on outcomes, be prepared and understand all available information, be assertive and strong so as to not compromise that which is important, be flexible, accommodating and do not take anything personally, and give them ownership of an idea to generate vigorous support. Under stress, a 'D' can be abrupt, blunt, aggressive, loud, irrational and rude, and can revert to bullying.

Influence is associated with communication style and social interactions. An 'I' likes to be the center of attention, is enthusiastic, often talkative, animated, persuasive and optimistic. They interaction positively in most situations, are interested in the emotions and feelings of others, are confident and good communicators, and adapt to new environments fairly well. An 'I' is motivated by relationships and need to feel accepted which means they do not cope well with rejection or exclusion. While they are warm and relaxed, they do not fit structured environments and follow their own path without considering consequences. When interacting with an 'I' (patient or colleague), be assertive to get them focused, provide praise and approval, use their enthusiasm and energy, and be personal and friendly. Under stress, an 'I' becomes more talkative, gets flustered, loses focus, imparts blame, sulks and can become very dramatic.

Steadiness is associated with patience, persistence and thoughtfulness. A 'S' is relationship focused and enjoy teamwork but thrive in relaxed, calm and supportive environments. They do not like change or confrontation and prefer to have time to plan and execute tasks. A 'S' is gentle, open, warm, sympathetic, supportive and introverted. They generally have a small circle of trusted friends and look to more socially assertive

people to initiate relationships. A 'S' has the highest organic level of emotional intelligence, are good listeners, dependable, loyal and are good at laborious tasks but need a good support network. While they toil away at tasks, they do not like interruption, tend not to like multi-tasking, adapt slowly to change or new environments, and can be slow at completing tasks. When interacting with a 'S', provide reassurance and support, be patient and calm, do not introduce surprises, provide detailed information, be organized and make eye contact during communication. Under stress, a 'S' becomes emotional, socially withdrawn, indecisive and will lose confidence.

Compliance is associated with structure and organization. They set high standards and like time to achieve excellence. They are persistent, eager to improve and focused on the detail. A 'C' can appear emotionally disconnected, impassive and cold but this relates to control and reluctance to unnecessarily reveal themselves or information. They are ambitious but use structured rules rather than assertiveness to progress. They are organized and quick thinking but structured and logical which means they need certainty before proceeding (risk averse). A 'C' is passive socially, naturally suspicious of others and develops relationships associated with mutual interests. They appreciate (demand) detail, value accuracy and precision (will correct errors others think are inconsequential), are cooperative, and prefer compromise over confrontation. Interactions with a 'C' require accuracy, patience, consistency, confidence and clinical approach (unemotional) but can be enhanced by setting time limits on tasks, praising their expertise and helping them see the broader context. Under stress a 'C' will become critical, shutdown and stop communicating.

Armed with these insights, students undertake a number of reflective exercises that require identification of traits among classmates, authentic clinical experiences where patients or colleagues exhibited specific traits, and identification of one's own balance of traits. When an 'I' is a patient, for example, they may be ignorant to the test and purpose, will answer questions in a convoluted fashion that may be a complete tangent, and are likely to forget information told to them. Communication needs closed questions or limited choice questions, staff need to be assertive without being impatient, explaining the

process should be in stages and have the patient repeat instructions back, and instructions might need to be written down. A 'D' might be aggressive, try to take charge and give the impression staff are an inconvenience to them. This requires being assertive without being unprofessional, staying focused and providing a concise explanation, and taking care not to take it personally. An anxious patient exhibiting traits of a 'C' or 'S' could appear distracted and non-communicative. Here, open questions might be used to draw them out. Eye contact, a friendly disposition and reassurance is needed to gain their confidence and trust. A summary of DISC traits and actions is outlined in table 1 and figure 2.

Table 1: Summary of variables associated with DISC traits.

	D	I	S	C
Motivation	Power, authority, outcome, success	Attention, friendship, fun	Building relationships, helping people, appreciation	Consistency, value, excellence
Key value	Power	Recognition	Approval	Respect
High priorities	Results, action, results, achievement	Enthusiasm, collaboration, action	Support, stability, collaboration	Attention to detail, use of expertise, knowledge growth
Low priorities	Relationships	Routine	Change	Relationships
Task focus	Immediately and fast	No rush but make it fun	Form a team and take time to complete	Do it yourself and do it properly
Comfort needs	Dominance and challenge	Recognition and interaction	Appreciation and service	Quality and accuracy
Response style	Reactive	Reactive	Reflective	Reflective
Risk approach	Does not consider consequences	Does not consider consequences	Risk averse	Risk averse, risk assessment
Dynamic style	Nature	Nurture	Nurture	Nature
Fears	Loss of control, vulnerability, appearing weak	Rejection, being ignored, disapproval	Change, disharmony, conflict	Criticism, making errors, excess emotion
Actions	Confident, direct, insensitive, impatient	Charisma, optimism, impulsive, disorganized	Patience, teamwork, indecisive, accommodating	Skepticism, precision, analytical, critical, isolated
Strong skills	Decision maker	Persuasive	Diplomat	Problem solving
Weak skills	Listening	Checking	Initiating	Deciding
Conflict default	Demands own way	Personal attack	Complies	Avoids confrontation
Stress default	Take charge	Argumentative	Withdraw	Seeks more data
For productive interactions	Let them take charge	Get theme excited	Support	Information
Avoiding conflict	Not being competitive	Letting them get ahead	Relax and no pressure	Let them set pace
Conflict follow up	Results	Attention	Support	Service
Effort areas for interactions	Concise and efficient	Interesting and interested	Cooperative and supportive	Accurate and ideas
Supporting them	Empower	Encourage	Care	Provide structure

Students are challenged to consider interactions between dominant traits and compatibilities. This reflection should go beyond the clinical environment to include relationships associated with sport, family and friends. For example, a classic 'D' or 'C'

are effective in individual sports and working alone while 'S' and 'I' personalities are more receptive to a team environment. While a 'D' and a 'S' are opposites, they can also be complementary remembering a 'S' will look to a 'D' or 'I' to initiate a relationship. Nonetheless, students generally identify situations where a 'S' is directly or incidentally bullied by the actions of a 'D'. While a 'D' and 'C' are task focused, they can clash over structure, pace, process and detail. A 'D' can borrow the credit for a group task while a 'C' will covertly manipulate the environment to not only reveal the error but also expose the actions of the 'D'. Group work is a key capability in any undergraduate course and students quickly adapt their understanding of DISC to reflect on group dynamics; the 'D' that takes over the project, the 'I' that wants to be center stage without contributing, the 'S' that brings snacks to make everyone feel better, and the 'C' who tries to redo the work of others to their own standard. The complexity of this simple four trait model and the richness of its use are exhibited in the following reflection:

> *I identify all four traits as dominant in different scenarios. The nature of my work in radiation really draws out the 'C' in me and it has allowed me to excel in my career. Realizing I have been over-looked for leadership positions, I have been consciously tapping into my inner 'S' and 'D' at various times. This is fairly natural because I lean on my 'D' characteristics when I play sport, including as team captain, and I fill the otherwise vacant 'S' role among my family that has been referred to as the glue keeping everything together. But I have a narrow circle of trusted friends among whom I feel safe enough to lower barriers and that is when my inner 'I' is revealed. Otherwise I am socially withdrawn in the absence of alcohol. Sometimes I felt like multiple people and certainly people in different aspects of my life see me very differently but it was not until I understood DISC that I could provide this insight; until now these different trait manipulations were accidental. I also see now that my strongest relationships are built with those that are predominantly 'S', I clash strongly when a 'D' is aggressive or rude to others and, without clashing, I tend to be irritated by those that are predominantly 'I'. When challenged, stressed or confronted, my default position is the safety of my inner 'C'.*

A key part of patient care, good teamwork and emotional intelligence is the ability to listen and observe. A 'S' and a 'C' tend to be good listeners, observant and appreciative of the detail. Conversely, a 'D' and an 'I' are poor listeners and pay little attention to the detail. Despite this, an 'I' along with a 'C' are best equipped to convert this knowledge (cognitive domain) to actual emotional intelligence (psychomotor domain). To be better health professionals and colleagues, there is a need to balance the four traits to ensure that, regardless of predominance, that there is enough balance in other traits to ensure emotional intelligence.

One of the intriguing aspects of DISC for students studying science-based courses, is the conversion of the DISC model from psychology to biology. While DISC was developed in 1923, 2005 saw the development of the Fisher temperament inventory (FTI) (*14*) which classifies personality traits based on biochemical predominance. Fisher identifies four key traits (figure 3). Directors are testosterone dominant with a tendency to be logical, decisive, skeptical, and direct communication style which is very much like the 'D' trait in DISC. Explorers are dopamine dominant with a tendency to be risk takers, creative, spontaneous, energetic, optimistic and impulsive which is very closely aligned with the 'I' trait of DISC. Negotiators are estrogen dominant who rely on social skills, empathy and relationship building which matches the 'S' in DISC. Builders are serotonin dominant and like structure, routine, and conformation to rules which is similar to the 'C' in DISC. Fisher uses these traits to describe compatibility among romantic partners where opposites attract and like attracts like. That is, other than attraction among the same trait, builders and explorers attract and directors and negotiators attract. This recognizes the same opposition in DISC where 'D' and 'S' are opposites but often form productive teams or relationships, and 'C' and 'I' of DISC mirrors the builders and explorers of FTI. Whether biochemical or psychosocial, a degree of care needs to be exercised when managing conflict or teamwork between DISC based 'C' and 'D' traits (directors and builders from FTI), and for 'S' and 'I' (negotiator and explorer from FTI).

Conflict resolution

Communication is the key to emotional intelligence and *conflict resolution*. While there are a number of approaches to conflict resolution, an emotionally intelligent person will focus on the issue not the person, be honest, be assertive but controlled, be agreeable and understanding, listen and acknowledge all perspectives, avoid being drawn into an argument, provide blameless but sincere apology, and provide action. As an exercise, students at Charles Sturt University are asked to role play a variety of scenarios of conflict with patients or colleagues. They are encouraged to consider the context and draw on authentic experiences to explain exactly how they feel, describe the specific action that made them feel that way, and the impact this or repeated incidents will have. This creates accountability without the need for assertiveness. For example, a not so uncommon event is a student being openly criticized or rebuked in front of staff or patients. Disempowered students lack the inventory to express their concerns or to challenge the behavior and this may manifest in them learning and repeating these behaviors when they are supervising students in the future. An understanding of DISC allows an emotionally intelligent student to identify specific traits and likely drivers, and to privately express something to the effect of:

> *I appreciate the feedback and your interests in helping me develop my clinical skills but when you openly criticize me in front of patients I feel humiliated and unprofessional which undermines my confidence and the respect patients and other staff have for me.*

Unsurprisingly, conflict resolution can adopt a number of strategies that align with the characteristics of the various DISC traits (figure 4). Emotional intelligence allows improved conflict resolution by finding a balance or middle ground. The compromise accommodates the DISC traits of all parties involved in the conflict and provides a model for proactive action to prevent conflict. Emotional intelligence at the initiation of group work, for example, allows issues to be pre-empted and actions initiated to mitigate.

Students at Charles Sturt University are challenged to understand their own personality traits and communication style more deeply. While real-time analysis is useful in honing

inter-personal skills as described above, a strong foundation underpinned by deeper insight into self-ensures that interactions and conflict resolution are initiated from a sound platform. Table 2 provides a series of descriptions that students would blindly (omission of row 1) tick those that apply to themselves. A simple summation of the number of ticks in each column represents the weighting of the DISC trait. Once students have determined and debated their balance of traits, they should be challenged to consider how they might best modify their own behaviors in order to get the most out of interactions with others, including those with the same trait dominance (table 3). These then become the foundation for authentic capability development in the clinical environment and students are encouraged to reflect on their learning, their interactions and how emotional intelligence helped or could have improved the scenario. This represents honing of the psychomotor skills required for emotional competence.

Table 2: Inventory for self-determining DISC trait balance (adapted from *15*).

D	I	S	C
Action orientated	Ambitious	Adaptable	Accurate / precise
Adventurous	Creative	Calm / relaxed	Cautious
Competitive	Energetic	Team orientated	Conscientious
Controlling	Enjoys change	Supportive	Consistent
Decisive	Enthusiastic	Enjoys popularity	Detailed
Firm or forceful	Friendly / fun	Enjoys routine	Enjoys instruction
Results orientated	Impulsive	Good listener	Factual
Independent	Group orientated	Loyal	Impersonal
Assertive	Initiator	Not demanding	Inquisitive
Quick to judge	Inspirational	Nurturing	Logical
Persistent / determined	Confident	Patient	Orderly / systematic
Productive	Emotional	Trusting	Organized / controlled
Purposeful	Mixes easily	Organized	Perfectionist
Seeks power	Motivator	Respectful	Persistent
Self-reliant	Optimistic	Sensitive feelings	Analytical
Direct	Animated	Sympathetic	Problem solver
Strong willed	Spontaneous	Thoughtful	Scheduled / organized
Takes control	Takes risks	Tolerant	Sensitive
Total =	Total =	Total =	Total =

Table 3: Summary of interaction actions associated with DISC traits.

Individual communicating	Individual being communicated with			
	D	I	S	C
D	Avoid ego collision and be flexible enough to compromise.	Invest time in socializing and be open / friendly.	Slow pace, soften tone and provide support / assurance.	Provide facts but be patient, firm and decisive.
I	Be concise, respect personal space, and do not take it personally.	Do not compete for recognition or attention. Focus on the issue.	Earn trust without being overly social. Provide support and assurance.	Provide facts, do not bluff, and respect personal space.
S	Be confident, do not take it personally but do not be intimidated.	Accept their enthusiasm and friendliness but do not waste time.	Be assuring, confident and assertive to expediate timelines.	Be confident, provide facts and do not be discouraged by skepticism.
C	Avoid too much detail and focus on key points and results.	Be friendly and enthusiastic, avoid detail, and focus on the person.	Allow time for information to be digested and be friendly and assuring.	Stay in control, consider all perspectives, do not let discussion drag on.

Students need to consider their own dominant traits to modify behavior to accommodate the needs of patients and staff. For example, a student with predominantly 'D' traits is likely to clash with most patients and staff through ego, impatience or communication differences. When dealing with staff or patients who are any of the four DISC traits, the student would be wise to channel their 'S'. Conversely, if a student were predominantly an 'S' and working in an environment dominated by a 'D', 'I' or a 'C', the capacity to draw on their own 'D', 'I' or a 'C' could bring balance that allows productive interactions. A working example might be a student trying to have a supervisor sign them off as meeting a capability or standard. For a 'D', make it their idea "*you asked me to spend time with person X performing bone scans so you can sign my paperwork, is that OK to do now?*". An 'I' might appreciate "*I have really enjoyed shadowing you while you do bone scans and picked up some amazing techniques that have really enhanced the way I do things*". For a 'S', provide a small gesture like a card or a note of thanks "*I could not have learned so much without your amazing support, I wish all supervisors were like you*". Finally, the 'C' will be the most difficult. Students should be prepared to answer questions and provide firm details on how many procedures have been completed "*I have read the standards

and have performed X bone scans that meet category A and Y bone scans that meet category B with all paperwork and reflections completed and submitted but would appreciate your scrutiny to determine whether I am ready for sign off". Similar application of DISC and emotional intelligence can help improve patient compliance and satisfaction as evidenced in the following reflection:

> *A patient arrived 15 minutes late. I observed that the patient was agitated and aggressive, and I wondered what the root cause was. Where they exhibited 'D' traits or were they an 'I' under stress? As a student predominantly a 'S', I did not have the confidence to ask as I felt intimidated by the situation. I should have taken the initiative and tried to determine if the patient was OK so recognize the need to have professional confidence to better help patients and staff. I think better interpersonal skills, communication and emotional intelligence could have helped improve outcomes. The overall mood for the day changed as did the team work. I felt upset that I had failed the patient in some way. I could imagine the patient was stressed and anxious about the seriousness of their health situation and a wider emotional intelligence inventory would have been well received. The scenario helped me understand that my 'S" predominance helps me empathise with the patient and potentially provide quality care. Realising this for the first time allowed me to proactively push myself to find the inner 'D', 'I' or 'C' where appropriate. Several patients over the subsequent week were also difficult for their own reasons and I actively channelled my 'D' instead of being passive; which gave me the confidence to be active and with that deliver the 'S' based care. The patient experiences were improved by my understanding and application of DISC, and my confidence and capability were enhanced.*

Armed with these basic skills and insights, there is an opportunity to workshop before students encounter an authentic clinical environment. Students are generally divided into large groups of 6-8 students to ensure there is a reasonable blend of DISC traits. A simple task of classification or ranking can then be used for individuals to score, and then for the group to settle on a score by negotiation that represents group consensus. The grounded

truth rank can be used to sum the differences from that grounded truth for both the individual and the group. The comparison of difference scores between the individual and the group may reflect their ability to influence the other members of the group. Nonetheless, the most important learning from the task is the student reflections on group dynamic and how emotional intelligence was used within the task. One such activity is the "lost at sea" ranking exercise (https://insight.typepad.co.uk/lost_at_sea.pdf).

Conclusion

Emotional intelligence is a powerful tool in enhancing interactions with patients and colleagues. While some have organic capabilities in emotional intelligence, there is a need to deliberately integrate skills and capabilities in curriculum of nuclear medicine programs, and more broadly across the health sector. Formal curricula in emotional intelligence promotes patient advocacy, improves outcomes and is consistent with the philosophy of personalized medicine. Rich immersive professional development activities targeting emotional proficiency using cognitive, affective and psychomotor taxonomies, could be readily weaved into didactic and authentic learning environments in undergraduate programs, and in continuing education activities for those already in the workforce.

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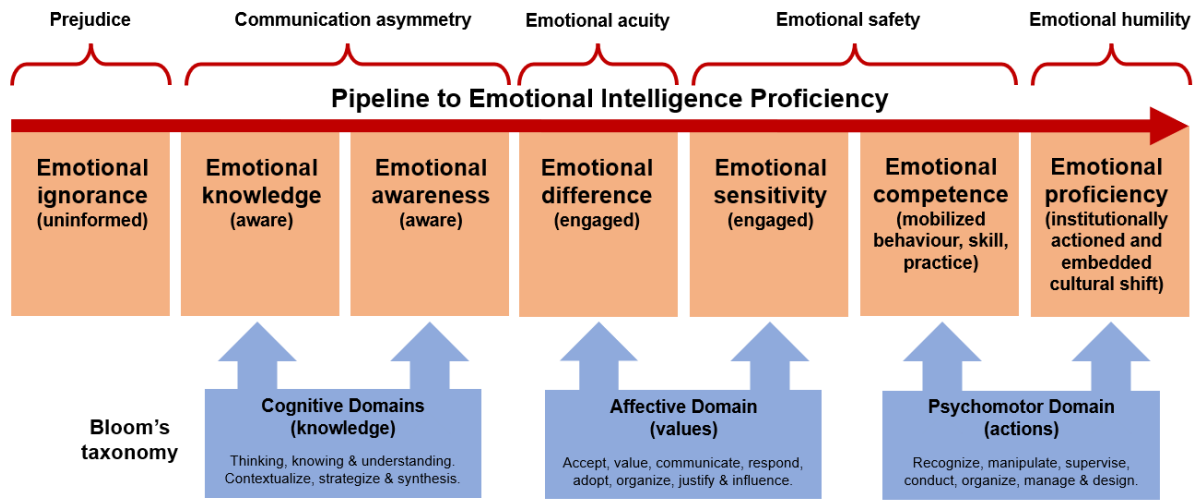
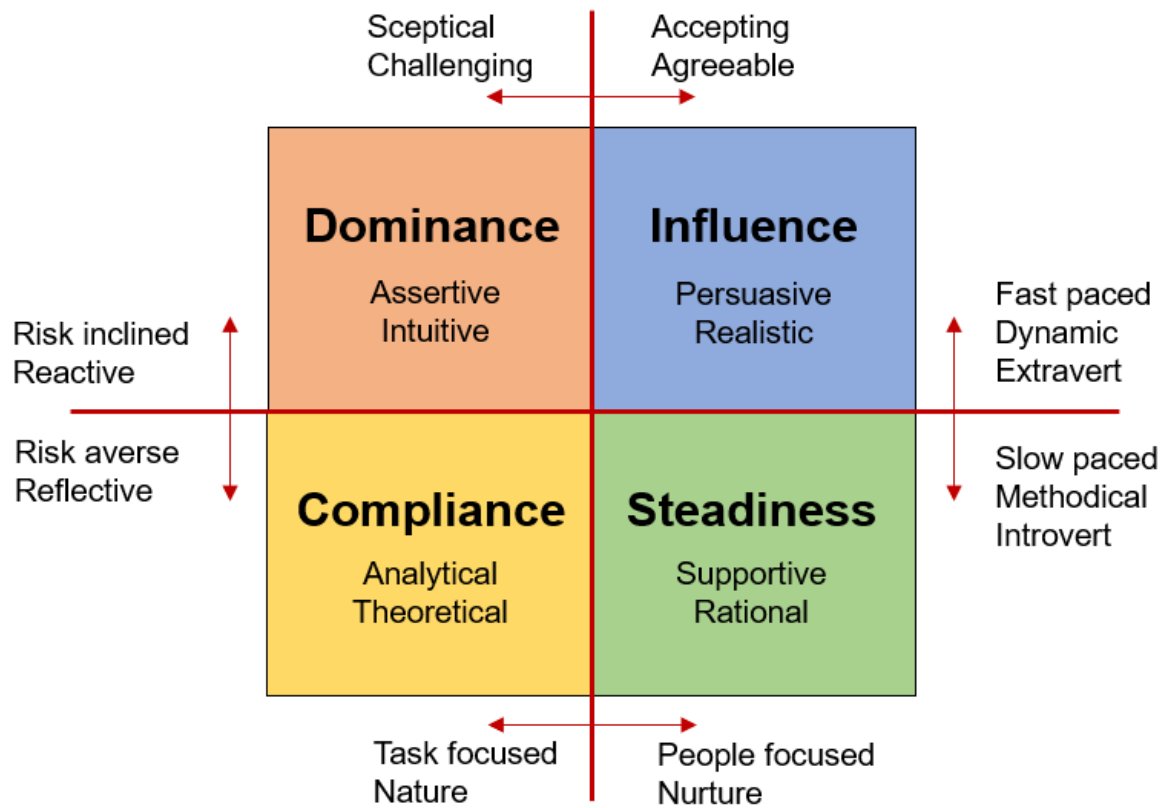Figure 1: Bloom's taxonomy mapped against the emotional intelligence proficiency pipeline.

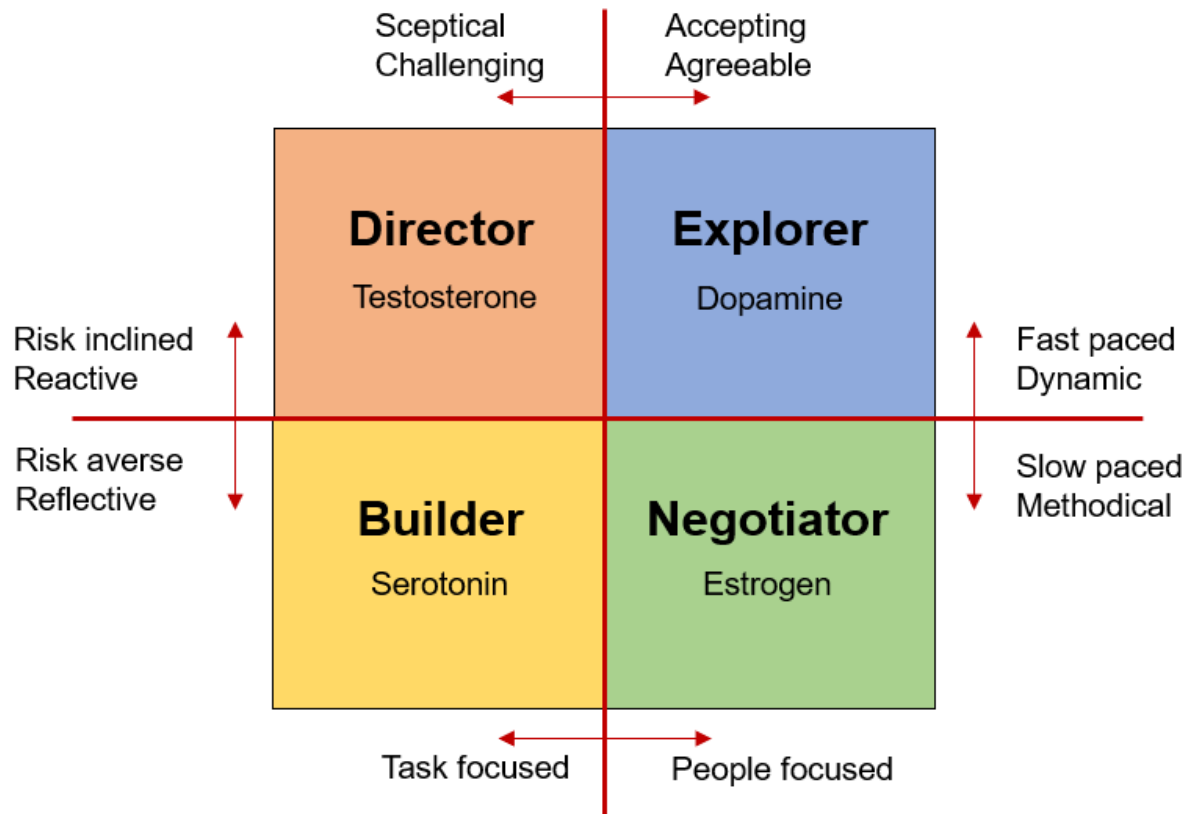Figure 2: Characteristics of the DISC traits.

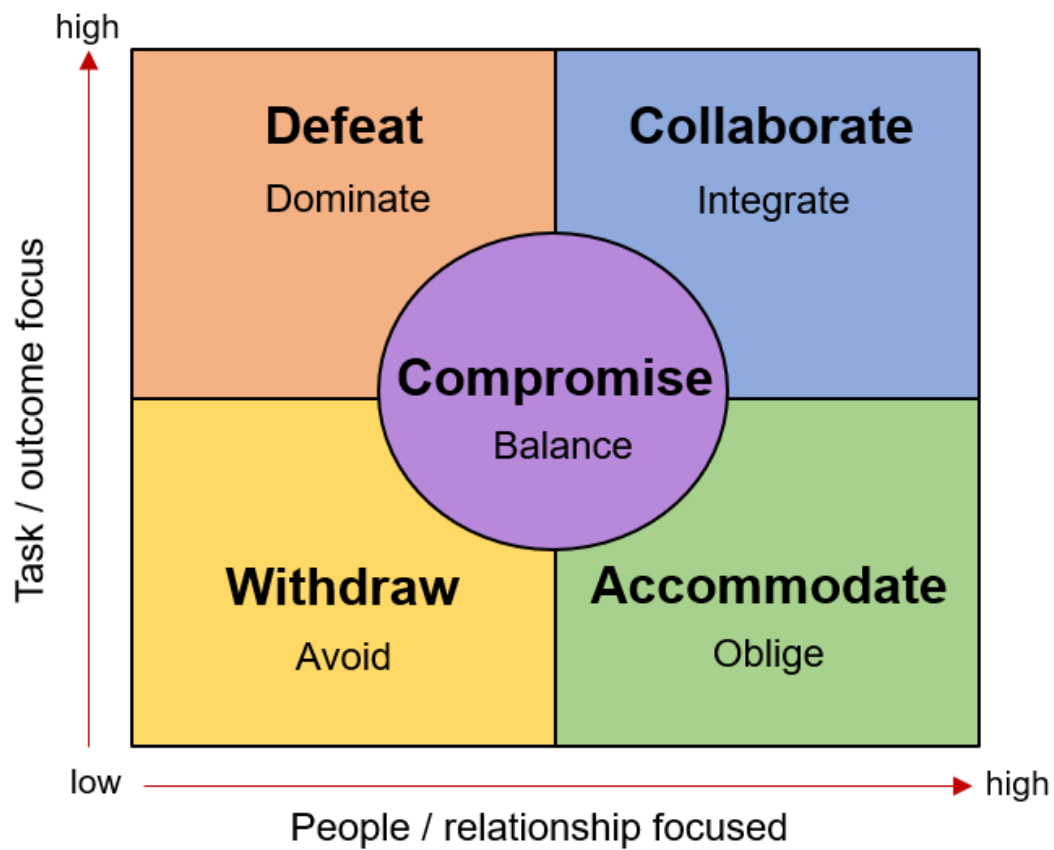Figure 3: Characteristics of the FTI traits match closely those of DISC.

Figure 4: Task versus people focused conflict resolution strategies match closely those of DISC.