**Systems Thinking: From Child and Adolescent Mental Health to Medicine**

*To the Editor:*

We are a multidisciplinary team of educators for the teaching module “Family psychiatry”, addressed to fourth year undergraduate medical students of the University of Southampton, UK.

Within the module, we have developed what we believe is an innovative approach to the teaching of Child and Adolescent Mental Health (CAMH), which we would like to share with colleagues involved in medical education.

Alongside furthering the understanding of mental health problems affecting children and adolescents, our aim is to address the need to educate doctors who understand that they work with and within systems, are good communicators, are able to appreciate relational patterns, and can work effectively in teams.1 These attributes have been identified as a primary goal of the undergraduate curriculum by many stakeholders such as the UK General Medical Council. 2 Despite this being a priority, few institutions have made these learning objectives an explicit part of their curriculum.

We believe that mental health professionals in Child and Adolescent Psychiatry (CAP), who regularly need to understand family and institutional dynamics in order to make sense of children’s behavioural and emotional difficulties, are uniquely positioned to teach medical students about the principles and practice of working with complex systems and relationships. As such, they can significantly contribute to bridge the gaps between CAP and the other medical disciplines.

Within this framework, in addition to the traditional teaching on the main CAP disorders and placements in CAMH services, our module “Family psychiatry” includes a formal, structured teaching day on *systemic thinking*, inspired by the basic concepts, methods and practice of systemic therapy.

Being familiar with the main systemic principles and techniques can enrich the understanding of human relationships, including the doctor and patient relationship. The teaching day focuses on the importance of *curiosity*, context and *assumptions* *in communication*, the importance of *circular causality* and the identification of patterns in relationships. We address the relevance of the concept of *context* in the *construction of meaning*, and how causal attributions of behaviour are often non-linear (see Table 1 for a definition of the terms in italics).3-5 We encourage students to examine assumptions around power in relationships and to consider the Gender, Race, Age, Culture, Ethnicity and Socioeconomic status (collectively referred to as GRACES). We also facilitate, through practical exercises, the development of practical skills such as the drawing of genograms, the construction and use of circular questioning, and the use of reflective groups. Students then observe a systemic therapeutic consultation and apply these principles and techniques through a role play exercise. We also encourage students to use these concepts and skills into other areas of medicine, offering a range of examples.

Some students have found the concepts, the format and the examination of their own values and prejudices somehow different from what they have become accustomed to during the previous teaching modules, and sometimes experience the day as “quite far from medicine” on first contact. However, the feedback from the majority of students has been so far very encouraging. Indeed, in the academic years 2016 to 2019, the overall quality of our systemic thinking module was rated as *very good or good* by 88% of students (450 in total) and *very good* by 45%. A number of students have highlighted that this module helped them to formulate cases beyond a pure (neuro)biological model, and to appreciate the complexity and usefulness of systems thinking in medicine.

Qualitative feedback seems to confirm our view that the value of the day goes beyond the standard learning in child psychiatry. Here are some examples of qualitative feedback:

*“I really enjoyed the systems day, even though I thought I wouldn't. I especially enjoyed the GRACES discussion as I thought we don't normally have discussions on these topics, as medical students.”*

*“Very useful to have session on circular questions. Not a technique I had come across before.”*

*“I found this session very useful as I learnt to re-frame the way I naturally think.”*

*“Really interesting and useful session. Very applicable to many areas of medicine.”*

*“Really good day with engaging teaching and learning ways to ask questions to get more out of patients was very useful.”*

In conclusion, we think that explicitly teaching the basic concepts and methods of systemic practice as part of the undergraduate curriculum may allow medical students to gain insights which are crucial, not only to appreciate the essence of child and adolescent mental health, but also to more comprehensively understanding and managing the complexities of patients’ presentations and team working in modern medicine, regardless of which speciality they will practice in. As such, we deem that this development in the curriculum of CAMH has the potential to be a fundamental experience in the journey of every medical student.

**References**

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3. Goldenberg I, Goldenberg H. *Family Therapy: An Overview.* Chapter 4. London: Thomson Learning. 2004.
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**Table 1. Key terms in systemic thinking** 3-5

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| **Key Concept** | **Definition** | **Example in CAMH practice** | **Example in medical practice** |
| Curiosity | An attitude of true inquiry about what is being communicated as opposed to confirming what we already know | “What exactly don’t you like about him?” | “What does ‘having a pacemaker’ mean to you?” |
| Assumptions in communication | The set of ideas and beliefs that we think do not require communication or curiosity and are often taken for granted | “Do we all mean the same thing by good?” | "Doctor said I had cancer, therefore I am going to die” |
| Circular causality | The idea that cause and effect are often interchangeable in communication depending on our point of view  | “I have to shout because you don’t listen, I can’t listen when you shout” | “I overeat to make me feel better about being obese” |
| Construction of meaning | What we consider important and meaningful is a social process, not a rule of nature  | “I only hit you for your own good” | “Having this transient ischemic attack (TIA) is a warning from your body that you need to do something about your heart” |
| The importance of context  | Meaning of a communication is specific to the context in which it happens.  | A parent may say “I hate my child” in the context of therapy, when the actual reason and purpose is to improve the relationship | “Take off your clothes” has a different meaning in a consultation room than in a bedroom |

CAMH: Child and Adolescent Mental Health