



LETTER TO THE EDITOR

Self-determined motivation in Dental Education: Are we supporting autonomy or controlling behaviour?

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Why do some students seem more motivated than others? Why do they behave and engage in different ways when facing academic and clinical activities? As dental educators, we would all want our students to be self-motivated, self-starters, and take responsibility for their patients and learning, but how is it possible to support motivation without attempting to control behaviour and impose pressure?

Motivation has been defined as the energy for every action we make; it constitutes the perceived reasons and forces that drive people to engage in determined activities or exhibit certain behaviour, including educational achievements. Traditionally, motivation has been thought as a unitary concept differing only in amount, and being explained as if “the amount” increases, the associated behaviour will increase as well.

It is reasonable to think that if we measure a student’s amount of motivation it will positively correlate with the expected behaviour, but is “the amount” of motivation and behaviour what matters the most? Can the differences in quality of motivation and its consequences be explained only relying on “the amount”?

Self-Determination theory (SDT)¹, which investigates the roles of self-determined and controlled behaviours, postulates the study of motivation as a multidimensional construct based on three different quality types. From the least to the most self-determined forms, these correspond to amotivation, controlled motivation, and autonomous motivation.

Amotivation is the absence of intent to pursue an activity due to one’s failure to establish contingencies between activity and behaviour, in other words, what students’ do and the consequences from these actions, seem unrelated to them. Controlled motivation involves behaving under pressure, coercion and demands towards specific outcomes or rewards. Forces are perceived to be external to the self. In turn, autonomous motivation involves behaving with a full sense of volition, choice, and self-determination. It represents the drive to pursue an activity, either for the pleasure or satisfaction derived from it, or because you value the activity and freely choose to engage, without internal or external pressures.

Several studies have found that internalisation of students motivation towards an intrinsic and autonomous form is associated with positive educational outcomes, such as deep level

study strategies, enhanced conceptual learning, creativity, better academic performance, enhanced self-esteem, and better psychological wellbeing. In contrast, controlled motivation and amotivation have been associated with negative outcomes, such as low competence, poor wellbeing, and inadequate psychological adjustment to university life¹.

If autonomous forms of motivation have been associated with positive educational outcomes and are considered the desired forms of motivation, then how can we, as dental educators, promote and facilitate them? A first point to consider is that motivation is mostly influenced by interpersonal factors, in other words, by social experiences in which others have powerful impact. Past research, especially in health professions education has highlighted the influence of interpersonal human and non-human factors that may promote optimal forms of motivation, such as type of curriculum, extent of responsibility, selection procedures, type of assessments, early patient contact, and teaching style².

A second point to consider is that SDT postulates that these interpersonal factors do not impact motivation directly, their effect is mediated by the impact they have on students’ perceptions of three basic psychological needs that represent essential needs that every individual tries to fulfil. These correspond to the needs of autonomy, competence, and relatedness.

First, the need for autonomy refers to making decisions by one’s own will, based on one’s own needs and values. It does not mean that students act independently from their tutors, it means engaging in clinical activities because they want to, freely choosing to devote time and energy to their studies or to a particular academic activity. Second, the need for competence refers to the desire of feeling capable of performing a determined task and it is related to seeking challenges that are optimal to one’s abilities. In this context, competence is not defined as an attained skill or ability per se, but rather as a perception of confidence and effectiveness. Third, the need for relatedness is described as the need for belongingness or connectedness with significant others, as well as with a significant community. It means being accepted and valued by people surrounding us, such as fellow students, teachers, or patients.

Consequently, if the dental teaching and learning environ-



ment satisfies students' perceptions of the aforementioned needs, autonomous motivation will increase, and conversely, if it impairs such perceptions then it will have negative effects and will facilitate controlled forms of motivation and amotivation. It is the perception of the social factors and not their planned objective that mainly affects motivation.

A consequence of the above is that the different types of motivation lead students to different quality types of educational outcomes, mainly at the cognitive, affective, and behavioural level. Thus, a student can be motivated in amount but this does not guarantee positive outcomes, it depends on which quality type of motivation is driving students towards academic activities.

The dental teaching environment can facilitate these basic needs and foster autonomous motivation through what has been described as an "autonomy-supportive teaching style". This is characterised by providing meaningful rationale, options, opportunities for self-directed decisions, and minimising external pressures; thus encouraging students to feel more autonomous, competent and supported by their teachers and peers. Dental teachers have expressed several strategies and behaviours that could be transferred to different settings, such as controlling external motivators; a gradual transference of responsibility; identifying and encouraging personal interests; giving timely and constructive feedback; delivering a vicarious learning experience; teamwork, team discussion, and providing a safe environment³.

Therefore, when supporting students' motivation our efforts should not be focused on controlling their behaviour, they should rather be focused on creating the conditions by which students can be self-motivated to learn and engage in academic activities.

Moreover, research has shown that students in health professions who learn in environments that support autonomous motivation tend to act in more autonomy-supportive ways in their interactions with patients. This autonomy supportive practi-

tioner-patient interaction has shown positive health outcomes in behaviour related areas such as smoking cessation, weight loss, prescription adherence, glucose control, and oral health care⁴.

Despite the relevant consequences exposed above, little attention has been paid to motivation in dental education research. Most investigations have been conducted on psychology, medical, and general higher education. As curriculums and exit profiles are different among professions, it is coherent to think that the process of motivation, including its determinants and consequences, will be different as well. For this reason, identifying students' motivational profiles and different determinants and consequences is highly pertinent, particularly in the dental education context that has been known for being highly controlling and demanding for students. This may lead managers, curriculum designer, and faculty staff to shift from well-intended controlling ways of motivating students, to designing adaptation-promoting interventions such as student- and patient-centred approaches, which may lead students to engage in academic activities in a self-determined way⁵.

The fact that every discipline has its own language and invites particular ways of thinking, makes it a challenge for dental educators to become more familiar with educational theory and research, including theories of motivation, in order to better understand and inform the process of dental education, that will ultimately benefit future practitioners and patients.

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REFERENCES.

1. Deci EL, Ryan RM. Self-determination theory: A macrotheory of human motivation, development, and health. *Can Psychol.* 2008;49(3):182–5.
2. Ten Cate TJ, Kusurkar RA, Williams GC. How self-determination theory can assist our understanding of the teaching and learning processes in medical education. *AMEE guide No. 59.*
3. Orsini C, Evans P, Binnie V, Ledezma P, Fuentes F. Encouraging Intrinsic Motivation in the Clinical Setting? Teachers' Perspectives from the Self-Determination Theory. *Eur J Dent Educ.* [Epub ahead of print].
4. Ng JYY, Ntoumanis N, Thøgersen-Ntoumani C, Deci EL, Ryan RM, Duda JL, et al. Self-determination theory applied to health contexts a meta-analysis. *Perspect Psychol Sci.* 2012;7(4):325–40.
5. Orsini C, Binnie V, Evans P, Ledezma P, Fuentes F, Villegas M. Psychometric Validation of the Academic Motivation Scale in a Dental Student Sample. *J Dent Educ.* [Epub ahead of print]