Social Interactions at Mealtime May Improve Food Intake

Dubé, L., Paquet, C., Ma, Z., McKenzie, D., Kergoat, M., & Ferland, G. (2007). Nutritional implications of patient–provider interactions in hospital settings: evidence from a within-subject assessment of mealtime exchanges and food intake in elderly patients. *European Journal of Clinical Nutrition*, *61*(5), 664-672.

How can mealtime interaction improve food intake?

Patients in hospital settings may be at risk for malnutrition as they become dependent on care providers for their daily food intake. The social interactions between patients and providers that take place during routine meal assistance can encourage food intake, thereby improving the consumption of recommended energy and nutrient needs for recovery and successful discharge.

What was done?

The relationship between mealtime interactions and nutritional intake was examined in a rehabilitation unit of a geriatric facility. The observed interactions were between patients and providers such as nurses and orderlies who were present during the meals to provide service and assistance to the patients. Thirty-two older adults (average age 78.8) who were free from clinical cognitive impairments or depression participated in the study. The human interaction components measured in this study were based on two modalities: agency (striving for power) and communion (promoting union with others). Agency includes dominance and submissiveness on the two ends of the spectrum and communion includes agreeableness and quarrelsomeness. Patient-provider interactions were observed during three meals a day, on every other day, until the patient was discharged or for a maximum of six weeks. Observations were made by trained assistants who assessed the verbal and non-verbal exchanges between participants and providers. Behaviours were ascribed to one interpersonal domain – dominance (e.g., expressed an opinion), submissiveness (e.g., gave in), agreeableness (e.g., expressed affection with words or gestures) or quarrelsomeness (e.g., confronted the other about something she/he did not like). To measure food consumption, researchers assessed the amount of food that remained on the plate immediately after participants left the dining room and compared their visual estimations with exact duplicates of the meals that were provided by food services. From this, researchers calculated the amount of energy and protein consumed by using standardized portions and recipes provided by food services. Researchers measured level of hunger before the meal and they also controlled for physical state based on self-report.

What was found?

The most frequently expressed behaviour for both participants and providers was dominance, followed by agreeableness, submissiveness, and quarrelsomeness. Results found that when more frequent interpersonal behaviours of any type were performed, the more there was an increase in required protein intake (but not in energy intake). When examining the specific modalities of human interaction (i.e., agency and communion), it was found that when patients performed more agentic behaviours toward providers, there was an increase in both protein and energy intake whereas patients' communal behaviour

toward providers were not related to either measures of intake. The communal and agentic behaviour of the providers toward the patient, however, did not yield significant improvements in energy and protein intake. When there was greater complementarity between participants and providers on the communion dimension (i.e., when the patient's and provider's communal behaviour were mutually reciprocated), higher protein intake was found. There was no relationship found between the complementary of agentic behaviours and intake. Upon controlling for meal duration, the relationship between protein intake and the total number of interactions, as well as the relationship between participants' agency scores and improved energy intake were no longer statistically significant. However, associations between improved protein intake and participants' agency scores as well as protein intake and the complementarity of communal behaviours remained significant. It was suggested that the impact of the nature of the interactions may therefore go beyond mere meal extension effects. It was also noted that the patients' expression of more dominant (versus submissive) behaviours toward providers was positively related to both protein and energy intake measures.

Importance of this research

This research suggests that there is a relationship between social interaction at mealtime and food consumption. Even after mealtime duration was controlled for, there was still a relationship between some types of interactions (i.e., participants' agency scores; the complementarity of communal behaviours) and improved dietary intake (i.e., protein). Having a clearer indication of how human interaction at mealtime can alter the food intake of older adults in routine care settings is important to reduce nutrition related risks such as protein-energy malnutrition.

Applying what was found

This study can be incorporated into settings where mealtime assistance is provided by caregivers such as hospitals, retirement homes, and long-term care facilities. Since patients' agency (specifically dominance) was found to be associated with positive protein intake even after mealtime duration was controlled for, this may be something that providers could be trained to promote in patients (e.g., encouraging autonomy). They could also strive for more complementarity of communal behaviour, such as mutual agreeableness (e.g., mutual eye contact and smiling) since this was also found to increase protein intake.

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