ecSatter correlates with superior wellness measures

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At the heart of a good relationship with food is the principle of Eating Competence. Eating Competence, as defined by the Satter Eating Competence Model (ecSatter), is being positive, comfortable, and flexible with eating as well as matter-of-fact and reliable about getting enough to eat of personally enjoyable, nourishing food.[1] Even though ecSatter says nothing at all about what or how much to eat or what to weigh, people who are Eating Competent (EC) have better diets, lower BMIs, superior metabolic profiles, more-positive quality of life indicators, are more active, do better with respect to managing a limited food budget, and do better with respect to parenting with food. Validated ecSatter measurement evolved from ecSI[2] through ecSI/LI, a revised version accessible to low-income subjects,[3] to ecSI 2.0, the official version valid across all income levels.[4] To get permission to use ecSI 2.0 in clinical practice, education, or research, at no charge, click here.

EC showed superior diets

Even though ecSatter doesn't emphasize eating "healthy" food and avoiding "unhealthy" food, and, instead, gives strong permission to eat preferred food, people who are EC do better nutritionally and with FV availability.

- Pandemic-related EC decrease (**31.69 vs 29.99** $p < 0.005$) correlated with decreased FV and increased sugary beverage consumption.[5]
- EC parents of fourth graders showed superior dietary quality (HEI scores) and a flexible definition of mealtime regularity.[6]
- EC predominantly non-Hispanic parents of fourth graders had more in-home FV, modeled more healthful eating, higher FV efficacy ("I can prepare fruit that my child will eat"), higher modeling ("How often do you prepare food at home?"), and had more in-home FV availability.[7]
- EC Finnish adults had better diet quality.(<0.001)[8]
- EC Finnish adults at risk of diabetes ate more fruits and vegetables.[9]
- EC Finnish adolescents showed greater family meal frequency, more frequent consumption of FV, and more health-promoting family eating patterns.[9]
- EC Hispanic parents tended to have food-preparation skills and positive attitudes toward cooking, cook with their child, eat breakfasts and dinners with their child, include and enjoy vegetables at dinnertime, and have greater in-home FV availability.[10]
- Low-income EC had higher fiber, vitamin A, E, C, most B-vitamins, magnesium, iron, zinc, potassium, higher Healthy Eating Index, were more likely to follow the Prudent dietary pattern.[11]
- EC low-income were most likely to plan meals, include all the food groups, shop with a list, cook from scratch, offer and serve more fruit.[3]
- EC university students had highest perceived dietary quality.[12]
- EC Spanish elderly ate more fruit, were more adherent to Mediterranean diet.[13]
- EC mixed income were most likely to offer and serve more FV, and were in action maintenance stage of change with FV.[2]

EC showed superior wellness, medical nutrition therapy measures

Even though ecSatter gives strong permission to eat preferred food and encourages using fat, salt, and sugar to make food taste good, people who are EC show superior wellness and metabolic indicators.

- Eating Competent participants were less likely to have severe Irritable Bowel Syndrome (IBS), more likely to have moderate IBS.[14]
- High EC gluten-restricted Brazilians did better with dietary adherence and were less likely to feel judged about following a gluten-free diet.[15]
- EC had lower previously undiagnosed type 2 diabetes, metabolic syndrome, HbA1c, triglycerides ($p < 0.05$ for all), lower BMI and fasting insulin, higher HDL. (<0.001).[8]
- Low-income EC had fewer oral health issues.[16]
- EC Spanish elderly had higher HDL-cholesterol, lower fasting blood glucose, total cholesterol, LDL/HDL cholesterol, diabetes, family HX early-onset heart disease.[13].
- EC mixed-income adults had higher HDL-cholesterol, lower systolic and diastolic blood pressure, even when stress tested (speech and cold water immersion) and lower LDL, triglycerides.[17]

EC showed lower BMI

Even though ecSatter does not encourage striving in any way for weight loss and, instead, encourages eating as much as is desired of preferred food and letting weight find its own level, people who are EC have the same or lower BMIs. *Starred (*): Weight taken by trained personnel*.

- Pandemic-related EC decrease EC (**31.69 vs 29.99** $p < 0.005$) correlated with weight increase.[5]
- EC parents of fourth graders have lower BMI.[6]
- *EC Finnish adults at risk for diabetes have lower BMI, are less likely to be obese.[8]
- EC Hispanic parents of fourth graders had lower incidence of overweight, obesity.[6]
- EC Finnish adolescents more often perceived their weight as appropriate and less often had tried to lose weight.[9]
- *EC university students have lowest incidence of overweight/obesity.[18, 19]
- *EC university students have lowest BMI.[12]
- EC low-income female adults have lower BMI.[3]
- *EC elderly Spanish have lower BMI.[13]
- EC subjects in validation trial have lower BMI.[2]

EC did better with low-income food management

Even though ecSatter offers no particular guidance on budgeting or food resource management, low-income EC tend to see themselves as food secure, whereas equally low-income non-EC are more likely to characterize themselves as food insecure. EC do better with respect to managing limited food resources.

- Low-income EC don't self-identify as food insecure. ecSI 2.0 scores: High/marginal food security: **30.4**; low food security: **23.1**. [16]
- EC least likely to run out of food before end of month, most likely to feel confident about managing food money.[3]
- Low-income EC least likely to self-identify as food insecure, most likely to plan meals, shop with a list, cook from scratch.[2]

EC showed lower eating-disorder-related symptomology

Even though ecSatter is about eating, EC affects quality of life and is therefore protective against eating disorders. EC captures positive eating attitudes and behaviors, which both reflect and act as a proxy for other quality of life indicators. EC, mental health, and self-care all depend on detecting, respecting, and

responding to feelings and preferences. Direct measures of quality of life (sleep, activity), mental health (emotional, psychological, and social well-being), and physical self-esteem all correlate with EC.

- Eating Competent Dutch adolescents had a far more coherent sense of self and were much less likely to show eating disorder symptoms.[20]
- Higher-EC university students of varying gender identities had higher weight satisfaction, lower weight-and-body- shame and/or guilt, current weight loss efforts, and eating disorder risk.[21]
- During the COVID epidemic, EC people with metabolic syndrome had greater vitality, mental health, lower depression, lower stress, and a greater likelihood of being food secure.[22]
- In university students during COVID, higher EC was correlated with lower experience of everyday discrimination, less stress, and being food secure.[23]
- EC parents scored high on sDOR.2-6y and had higher parent quality of life indicators (sleep, stress, emotional, psychological, and social well-being).[24]
- EC Finnish adults at risk of diabetes had higher physical activity and better sleep quality, were less likely to smoke.[8]
- EC Finnish adolescents more often perceived their body size as appropriate, had less often tried to lose weight, had higher self-esteem and a stronger sense of coherence. [9]
- EC university students showed more physical activity, higher sleep duration[18] and quality of sleep.[19]
- EC introductory nutrition students were less likely to report past or current eating disorders[25]
- EC low-income adult females showed lowest interpersonal distrust, impulsivity, ineffectiveness, maturity fears and social insecurity as well as lowest body dissatisfaction, drive for thinness, restrained eating, disinhibited eating and (intolerable) hunger.[2, 3]
- EC university students had lowest desired weight loss, lowest emotional eating, lowest psychological/ emotional distress[12]
- EC university students had higher weight satisfaction, lower desire to lose weight.[26]
- EC low-income adults in cognitive interviews had positive eating attitudes and behaviors: food seeking, enjoyment, satisfaction, relaxation, positive re cooking. **Non-EC** low-income had negative eating attitudes and behaviors: Emphasis on weight management, food restriction and avoidance, sporadic and/or inattentive eating, guilt/misery regarding eating the wrong food, negativity regarding cooking, desire to buy low-fat and diet products, desire to stop eating junk food.[27]

EC showed higher activity

Even though ecSatter says nothing about activity, EC have higher levels of physical activity and indicators of activity.

- EC Finnish adults had higher physical activity.[8]
- EC college students showed correlations across EC tertiles for >60 minutes of physical activity.[18]
- EC low-income women showed correlations across EC tertiles for self-reported physical activity.[3]
- EC college students reported higher levels of physical active, had a higher VO_2 max, a measure of lung function.[12]
- EC adults across income categories showed correlations across EC tertiles for self-reported physical activity.[2]

EC showed better parenting with food

Even though ecSatter says nothing about feeding children, EC parents do better with respect to following the Satter Division of Responsibility in Feeding (sDOR) and raising children who have lower nutritional risk.

- EC parents were more likely to follow sDOR.2-6y, show lower restriction and pressure on child's eating, lower cognitive restraint with parent eating, and higher parent quality of life indicators (sleep, stress, psychosocial functioning).[24]
- Brazilian parents who score high on ecSI 2.0-BR scored higher on sDOR.2-6y-BR. That is, parents who are competent eaters adhere more to the principles of sDOR.[28]
- EC parents of children who comply with a gluten-free diet have higher EC scores.[29]
- Video-captured mothers of 2 through 5-year-olds who indicated on sDOR.2-6y that they followed sDOR indicated they actually did take leadership and give autonomy with feeding.[30]
- EC showed highest fdSI (precursor to sDOR.2-6y), are likely to divide feeding responsibilities, view child's eating positively.[31]
- EC mothers of 2 through 5-year-olds showed low restriction, appropriately divided feeding responsibilities.[32]

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