

Changes in food consumption during the COVID-19 pandemic: consumer survey data from Denmark, Germany and Slovenia

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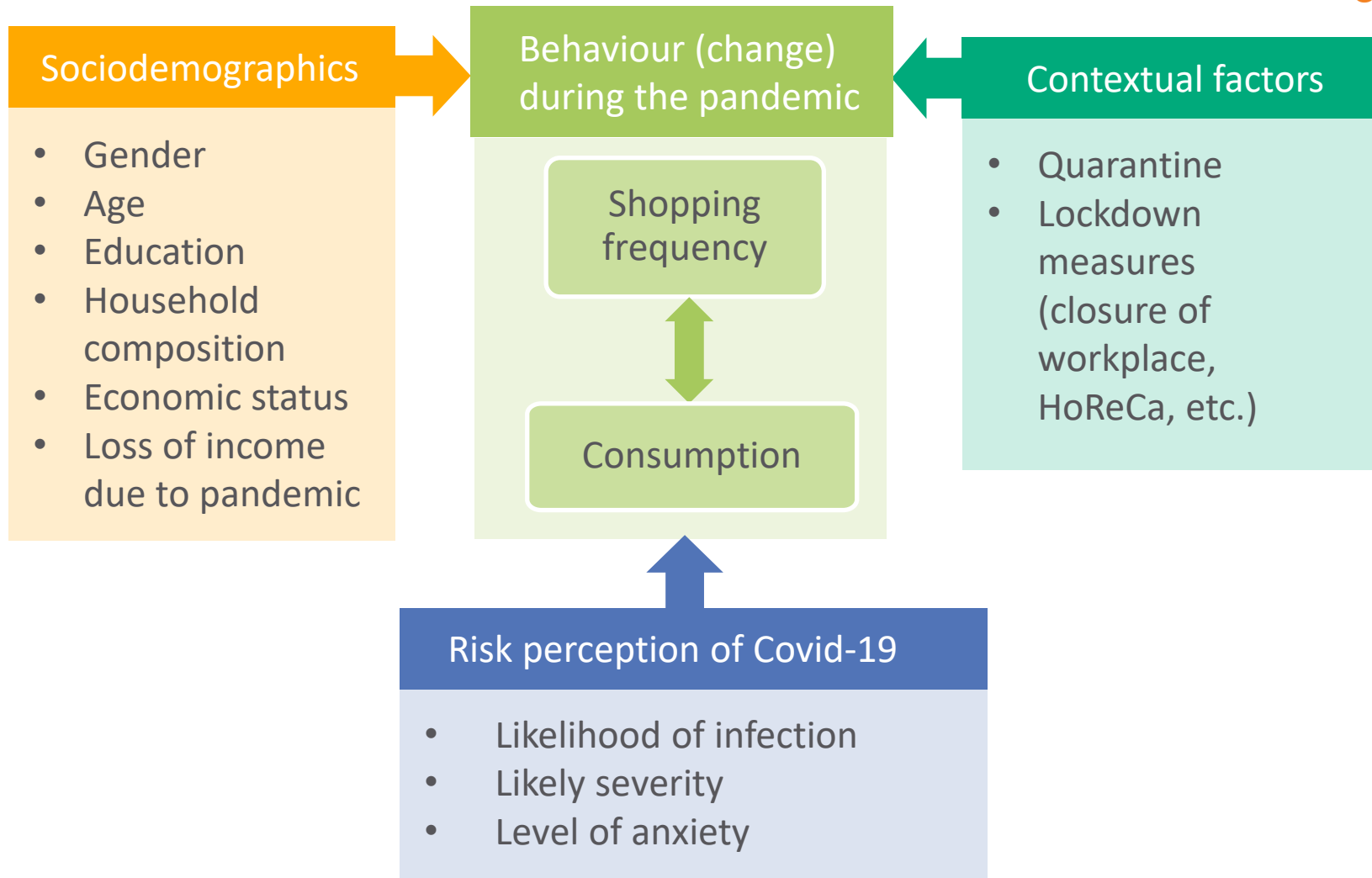


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How does food consumption change during lockdown?



How might Covid-19 affect our food consumption?



Methodology

- Online survey, representative on age, gender, region
- Denmark (n = 1105)
- Germany (n = 973)
- Slovenia (n = 602)
- Launched April-May 2020, during lockdown
- Individual & household consumption

Lockdown conditions

- Lockdown started mid-March in all three countries
- Most restrictive in Slovenia (e.g. public transport shut, travel only within own municipality) – borders on COVID hotspot of Italy
- Most relaxed in Denmark (no mobility restrictions)
- All 3 countries had low infection rates

Overall changes in food consumption

	DK	DE	SI
Fruit & Veg	↓	↓	↓
Meat	↓	↓	↓
Fish	=	↓	↓
Bread	=	=	↑
Dairy	=	↑	=
Frozen food	=	=	=
Canned food	=	↑	=
Ready-made meals	↑	↑	↓
Cake & biscuits	↑	↑	=
Sweets	↑	↑	=
Alcohol	↑	↑	=

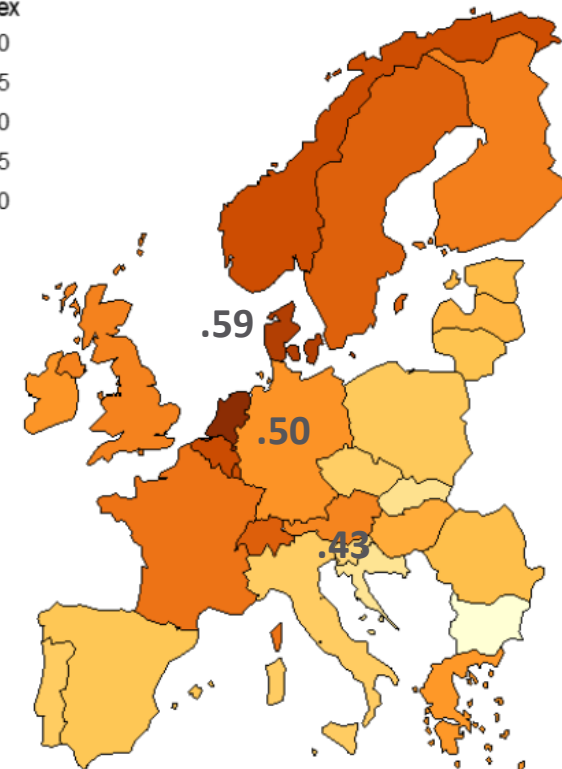
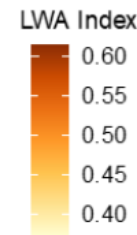
- Less fresh food consumed across countries during pandemic
- Increased non-perishables in DK and DE but not in SI

↑ Increase during Covid-19 compared to before
 ↓ Decrease during Covid-19 compared to before
 = No change before vs during Covid-19 www.eufic.org

Greater income loss in SI affected consumption

Of those who reported income loss due to the pandemic:

	DK (9%)	DE (23%)	SI (53%)
Fruit & Veg			↓
Bread			↑
Ready-made meals		↑	↓
Sweets	↑		
Alcohol	↑		↓



Greater loss of income in SL could be due to decreased lockdown working ability (LWA) based on:

- the level of teleworking for each occupation and
- whether the occupation is considered essential or closed

<https://voxeu.org/article/inequality-and-poverty-effects-lockdown-europe>

Reduced fresh food intake related to reduced shopping frequency

As shopping frequency ↓

	DK	DE	SI
Fruit & Veg	↓	↓	↓
Meat	↓	↓	
Fish	↓	↓	
Bread		↑	↓
Dairy	↓	↓	
Frozen food	↑	↑	
Canned food	↑	↑	
Cake & biscuits	↑	↑	
Sweets	↑	↑	↑
Alcohol	↓	↑	

- In all 3 countries, as shopping frequency ↓ consumers bought less fresh food, and more sweet snacks
- In DK and DE, as shopping frequency ↓ consumers bought more frozen and canned food

Reduced fresh food intake related to increased risk perception of COVID-19

As risk perception ↑

	DK	DE	SI
Fruit & Veg	↓	↓	
Meat			↓
Bread	↓		↓

- Could be because fruits, vegetables and bread are more often sold unpackaged
- In DK & DE: as risk perception ↑, shopping frequency ↓



Convenience foods replaced “eating out” in DE and SI

Of those who had eaten out \geq once a week:

	DK	DE	SI
Meat			↓
Fish		↓	
Dairy	↑	↓	
Frozen food			↑
Canned food		↑	
Ready-made meals		↑	↑
Cakes & biscuits		↑	
Alcohol	↓		



Respondents in households with children in DE & SI increased fresh food intake

Compared to other households, respondents living with children:

	DK	DE	SI
Fruit & Veg		↑	
Meat			↑
Fish		↑	
Bread	↑		
Dairy		↑	
Sweets	↑		
Alcohol	↑		

Could be due to:

- Schools reopening during the survey period in DK, but after the survey period in SI and DE
- Cultural differences:
 - In DK, main meal is served in the evening, lunch often consists of sandwiches
 - In DE & SI, lunch is more often a hot meal
 - As children no longer eat lunch at school, lunches are increasingly being prepared at home, which could underlie these changes

Women more likely to increase fruit & veg intake

Women (compared to men)

	DK	DE	SI
Fruit & Veg	↑	↑	↑
Meat			↓
Fish			↓
Bread		↓	
Canned food			↑
Cake & biscuits	↑		
Sweets	↑		

Men (compared to women)

	DK	DE	SI
Meat	↓		
Fish	↓		
Dairy		↓	
Canned food	↑		
Cake & biscuits	↓		

Could be because women feel more strongly that fruits and vegetables are good for health (Emanuel et al., 2012)

Summary



Across DK, DE, SI, people reduced their consumption of fresh food
This change is related to reduced shopping frequency during the pandemic in all countries, and increased risk perceptions of COVID-19 in DK and DE

In DK and DE, people also increased their intake of nonperishables, but not in SI

This may have been due to more people in SI being affected by loss of income

Convenience foods replaced “eating out” in DE and SI

Dietary patterns of households with children differed between some countries, perhaps due to different cultural eating norms and children returning to school earlier in DK

Women were more likely than men to increase their intake of fresh fruit and vegetables

Implications

A health crisis should motivate people to eat more fresh fruits and vegetables, but people actually reduced their intake

This was related to reduced shopping frequency, and increased risk perceptions, suggesting that changes may be due to decreased accessibility and hygiene concerns

Future research should verify the underlying reasons for reduced fruit & veg intake → implement measures that could increase consumption during Covid-19 (e.g. more accessible fruit and vegetable delivery, reduced handling of fruits and veg)

Women increased intake of fruit and vegetables more than men. Does this contribute to worse COVID-19 outcomes in men?

Suggests that campaigns about fruit and vegetable intake could be better targeted at males