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Food and commensality among incarcerated women in closed regime

A comida e a comensalidade entre mulheres privadas de liberdade em regime fechado

Abstract

Introduction: Incarceration in closed regime changes the living conditions and daily eating habits of individuals. **Objective:** Describing the exchanges and donations of food between inmates in cells and investigating the degree of influence of cell coexistence on eating behavior. **Methods:** Observational, cross-sectional, and descriptive study, conducted with incarcerated women in closed regime in Natal/RN. A questionnaire was applied on socioeconomic characteristics, food provided by the Penitentiary Complex, food brought by visitors, and exchanges and donations between inmates. The prevalence ratio and their respective confidence intervals were used to assess the strength of the association between the variables. **Results:** Most participants were dissatisfied or indifferent to the quality (96.8%), taste (98.4%), and quantity (71%) of the food provided by the prison system, and commonly received food brought by visitors (85.2%). The exchange of food in cells was common (82.3%) and greater among inmates with longer periods of incarceration (PR: 1.28; 95%CI 1.01-1.63). Most inmates reported being influenced by their cellmates regarding the number of meals, type, and quantity of food consumed throughout the day. There was also a high proportion of women who acknowledged influencing the food consumption of their cellmates. **Conclusion:** The number of meals, type, and quantity of food consumed throughout the day were associated with the influence inmates had inside the cell and the food exchanges that occurred. Commensality among inmates is a strategy for seeking autonomy, maintaining identity, and consolidating relationships.

Keywords: Incarcerated population. Food. Social Interaction. Eating Behavior.

Resumo

Introdução: Viver em privação de liberdade em regime fechado altera as condições de vida e o cotidiano alimentar das pessoas. **Objetivo:** Descrever as trocas e doações de alimentos entre detentas nas celas, e investigar o grau de influência da convivência em cela sobre o comportamento alimentar. **Métodos:** Estudo observacional, seccional e descritivo, realizado com mulheres cumprindo pena em regime fechado em Natal/RN. Aplicou-se

questionário sobre as características socioeconômicas, a alimentação oferecida pelo Complexo Penitenciário, os alimentos levados por visitantes e as trocas e doações entre detentas. Utilizaram-se a razão de prevalência e seus respectivos intervalos de confiança para avaliar a força da associação entre as variáveis. **Resultados:** A maioria das participantes era insatisfeita ou indiferente quanto a qualidade (96,8%), sabor (98,4%) e quantidade (71%) da alimentação fornecida pelo sistema prisional, sendo comum o recebimento de alimentos trazidos por visitantes (85,2%). A troca de alimentos nas celas era habitual (82,3%), e foi maior nas detentas com maior tempo de reclusão (RP: 1,28; IC95% 1,01-1,63). Grande parte das detentas relatou sofrer influência das colegas de cela em relação ao número de refeições, tipo e quantidade dos alimentos consumidos ao longo do dia. Também foi elevada a proporção de mulheres que reconheceu exercer influência sobre o consumo alimentar das detentas da mesma cela. **Conclusão:** O número de refeições, tipo e quantidade dos alimentos consumidos ao longo do dia mostraram-se associados com a influência das detentas na cela e as trocas alimentares. A comensalidade entre as detentas é uma estratégia de busca por autonomia, manutenção da identidade e consolidação de relações.

Palavras-chave: População Privada de Liberdade. Alimentos. Interação Social. Comportamento Alimentar.

INTRODUCTION

Incarceration for those who have committed criminal offenses classified as crimes has a preventive, retributive, and resocializing purpose.¹ During this period, the Brazilian Penal Execution Law established that caring for prisoners is a duty of the State, which must provide material, legal, educational, social, and religious assistance, as well as guaranteeing the rights to health and sufficient food.²

Food has a direct effect on the well-being of individuals, affecting their physical, mental, and emotional health, which are crucial to validating the purposes of incarceration.³ Currently, in Brazil, in almost all prison units, meals are provided to inmates by outsourced companies, which can deliver ready-made meals prepared by their employees in other spaces or manage the food service within the penitentiary institution.⁴

Under Article 13 of Resolution No. 14 of November 11, 1994,⁵ the food consumed in these institutions must be managed by a nutritionist and *“prepared in accordance with hygiene and dietary standards, and must have sufficient nutritional value to maintain the health and physical vigor of incarcerated individuals.”* However, the presence of these professionals is not yet a reality in Brazilian prison units.

Consequently, there are recurring complaints related to the food provided, characterized as tasteless, bland,⁶ monotonous, and repetitive.⁷ There are also numerous reports of poor hygiene and sanitary conditions throughout the country.^{8,9} The food transported presents problems such as being packaged in dirty and improvised containers and receiving inadequate refrigeration, causing the meals delivered to inmates to be unfit for consumption. In some cases, they are also accompanied by random pieces of objects, insects, and disease vectors.⁸

Furthermore, meals are qualitatively inadequate from a nutritional perspective.⁶ There is a limited intake of fruits, leaves, and vegetables, which favors several nutritional deficiencies.⁷ On the other hand, there is a wide availability of meals rich in simple carbohydrates while at the same time being poor in proteins.⁴ All these aspects, associated with the sedentary lifestyle imposed by the infrastructure of penitentiary establishments, contribute to the high prevalence of overweight and obesity and the reported morbidity of chronic non-communicable diseases.^{10,11}

Additionally, the small number of daily meals and the inadequate times at which they are served encourage the overvaluation of external food brought during visits, even though it is also limited in quantity and quality. Not all prisoners receive visits, especially women,⁷ nor do they receive all the items they want. Therefore, food donations and exchanges are a reality within the cells.

The operationalization of the menu and the production flow are mainly the responsibility of food supplier companies, and there are no nutritionists in the prison units to attest to the nutritional and hygienic-sanitary quality of the meals received before they are offered to the inmates.

It is important to emphasize that incarcerated individuals do not lose their citizenship status,¹² their freedom is only restricted, and some rights are suspended for a specific period. Thus, they must be assured of their constitutional right to food,² a human right of all Brazilians, established by Constitutional Amendment No. 64, which amends Article 6 of the Brazilian Federal Constitution. Furthermore, in the context of prison units, food is directly related to the socialization and well-being of individuals, with recurrent rebellions motivated by dissatisfaction with food conditions¹³ and restrictions on receiving external supplies.⁹

The act of eating together initiates and/or consolidates relationships, provides pleasure to individuals,^{14,15} promotes a sense of security (a human need,¹⁴ even more evident in the hostile environment of prison units). For the incarcerated population, it also plays an important role in alleviating psychological suffering and food insecurity.

Studies on the impact of food in penitentiary institutions are still scarce, and commensality and the social role of food still need to be explored. In view of the above, this study describes how food donations and exchanges take place inside cells and investigates the degree to which cell life influences the eating behavior of people incarcerated in closed conditions.

METHODS

This is a cross-sectional, observational, quantitative, and descriptive study, conducted with women incarcerated in closed regime in the city of Natal, Rio Grande do Norte, Brazil. The prison unit investigated is one of three in the state that have female pavilions for incarceration in closed regime (Natal, Caicó, and Mossoró), and is the one with the highest concentration of inmates with this type of sentence.

For data collection, all women sentenced to incarceration in closed regime were considered eligible, regardless of age group and time served. Those who were in isolation areas, pregnant or breastfeeding, and/or had some type of disability were considered ineligible.

The investigation took place between January 2015 and April 2016, based on interviews conducted with inmates on days and times established by the prison complex management. All interviews were conducted with the inmates inside their cells, and with the researchers positioned outside, next to the bars, as determined by the unit management.

The questionnaire used to guide the interviews consisted of open and closed questions, to map sociodemographic and economic characteristics: age [< 30 years; ≥ 30 years], marital status [single/separated/ widowed; married/ living with partner], education [up to elementary school; elementary school or higher], length of incarceration [< 12 months; 12 to 24 months; > 24 months], monthly family income [< 0.25 minimum wages; 0.25 – 0.50 minimum wages; > 0.50 minimum wages]. The frequency of receiving visits was classified as regular when it was weekly, and as irregular when it occurred biweekly, monthly, sporadically or never.

The inmates were asked about their level of satisfaction with their current body [very satisfied, satisfied, indifferent, dissatisfied, very dissatisfied], and a Body Image Scale was also created presented, which was created and validated to assess the body image of Brazilians.¹⁶ They were asked to choose which silhouette reflected their body at the time of the interview, from which it was possible to identify the estimated nutritional status [overweight; not overweight] based on the body mass index value established for the silhouette.¹⁶ They were also asked which silhouette indicated the body they would like to have, aiming to identify their desire regarding body size [maintain; increase; reduce].

Regarding food, the participants were asked about their satisfaction with the food offered by the Penitentiary Complex [satisfied; dissatisfied/indifferent], what external food they received, which visitors brought it [spouse and/or partner; others (father and/or mother, relatives, friends, and other people)], and how often it was brought [weekly, biweekly, monthly, sporadically, never]. The participants were also asked about receiving food donations and participating in food exchanges inside their cells: if they occurred [yes; no], how often they occurred [regularly; sporadically or never]; how often women participated [regularly; sporadically or never], and what food was usually shared. Finally, the perception of the inmate regarding the existence of influence from her cellmates over her, and of her over them, was investigated [yes; no], in relation to the type and quantity of food consumed and the number of meals eaten during the day.

The investigation was approved by the Research Ethics Committee of the Onofre Lopes University Hospital (CAAE: 38714714.0.0000.5568; Opinion 928.114) and complied with national and international legislation on research involving human beings.

Statistical analysis of the data was performed using the IBM SPSS statistical package, version 22.0, presenting the frequencies of the categorical variables. To investigate the strength of the association between the perception of suffering and exerting influence by cellmates (regarding the type, quantity, and number of meals consumed throughout the day) and between participation in exchanges of food and the characteristics of the inmates, the prevalence ratio (PR) and their respective 95% confidence intervals (95%CI) were calculated. A p-value <0.05 was considered statistically significant.

RESULTS

Of the 116 women present at the prison complex during data collection, four were in isolation, seven were transferred to another prison unit, or were released before participating in data collection, and one was pregnant and was in the hospital on the day of data collection. Of the 104 eligible women approached during data collection, 41 refused to participate in the study, making a total of 62 participants (a loss of 39.4%).

Most women were under 30 years of age (51.7%), had no partner (78.2%), completed elementary school (78.8%), and had a per capita family income of less than a quarter of the minimum wage (45.8%). Most had been in prison for less than two years (74.1%) and did not receive regular visits from friends and family (71.7%). Excess weight was common (71%), as was the desire to reduce it (52.5%); they also expressed dissatisfaction with their own body (53.2%) (Table 1).

Table 1. Sociodemographic and psychosocial characteristics of the female incarcerated population (n=62). Natal, Rio Grande do Norte, Brazil – 2016.

Variable	n	%
Age range	60	
< 30 years	31	51.7
>= 30 years	39	48.3
Level of education	52	
Up to elementary school	41	78.8
High school or higher	11	21.2
Per capita family income	24	
< 0.25 minimum wages	11	45.8
0.25 – 0.50 minimum wages	10	41.7
> 0.50 minimum wages	3	12.5
Marital status	55	
Single / Separated / Widowed	43	78.2
Married / Living with a partner	12	21.8
Length of incarceration	54	
< 12 months	23	42.6
12-24 months	17	31.5
>24 months	14	25.9
Visits occur regularly	53	
Yes	8	15.1
No	45	84.9

Table 1. Sociodemographic and psychosocial characteristics of the female incarcerated population (n=62). Natal, Rio Grande do Norte, Brazil – 2016. Continues.

Variable	n	%
Estimated nutritional status	62	
Not overweight	18	29.0
Overweight	44	71.0
Level of satisfaction with the current body size	62	
Satisfied/ Indifferent	29	46.8
Dissatisfied	33	53.2
Desire regarding body size	61	
Maintain	7	11.5
Increase	22	36.0
Reduce	32	52.5

Regarding food, most participants were dissatisfied or indifferent to the quality (96.8%), taste (98.4%), and quantity (71%) of the food provided by the prison unit. It was common to receive external food, brought by visitors (85.2%), but with irregular frequency (58.3%) (Table 2). The most common external foods, selected from the list of items allowed by the prison management, were instant noodles, cornmeal flakes for couscous, cookies, candy, margarine, eggs, powdered artificial juice, coffee, and sugar.

In almost all cells, the exchange of food between inmates was reported as common (82.3%), and the majority admitted to being involved in this practice (79.0%). A large proportion of the women reported being influenced by their cellmates regarding the number of meals, type, and quantity of food consumed throughout the day. The proportion of women who acknowledged having an influence on the food consumption of other inmates was also high (Table 2).

Table 2. Perceptions and practices related to nutrition among the female incarcerated population (n=62). Natal, Rio Grande do Norte, Brazil – 2016.

Variable	n	%
Satisfaction regarding prison food - quantity	62	
Satisfied	18	29.0
Dissatisfied or indifferent	44	71.0
Satisfaction regarding prison food - quality	62	
Satisfied	2	3.2
Dissatisfied or indifferent	60	96.8
Satisfaction regarding prison food - taste	62	
Satisfied	1	1.6
Dissatisfied or indifferent	61	98.4
Receiving external food from visitors	61	
Yes	52	85.2
No	9	14.8
Frequency of receiving external food from visitors	48	
Frequent (weekly)	20	41.7
Infrequent (fortnightly, monthly, sporadically, never)	28	58.3

Table 2. Perceptions and practices related to nutrition among the female incarcerated population (n=62). Natal, Rio Grande do Norte, Brazil – 2016. Continues.

Variable	n	%
Visitor who brings external food	48	
Spouse and/or partner	6	12.5
Others	42	87.5
Occurrence of food exchanges in the cell	62	
Habitual	51	82.3
Sporadic / does not occur	11	17.7
Participation in food exchanges in the cell	62	
Habitual	49	79.0
Sporadic / does not occur	13	21.0
Are you influenced by your cellmates? - type of food	62	
Yes	34	45.2
No	28	54.8
Are you influenced by your cellmates? - amount of food	62	
Yes	33	53.2
No	29	46.8
Are you influenced by your cellmates? - number of meals	62	
Yes	31	50.0
No	31	50.0
Do you influence your cellmates? - type of food	62	
Yes	33	53.2
No	29	46.8
Do you influence your cellmates? - amount of food	62	
Yes	32	51.6
No	30	48.4
Do you influence your cellmates? - number of meals	62	
Yes	32	51.6
No	30	48.4

Regarding the influence exerted by cellmates, women who received food from outside the prison less frequently felt less influenced regarding the type of food consumed (PR 0.57; 95%CI 0.35-0.94). Those who wanted to reduce their body weight felt less influenced regarding the number of meals to be eaten throughout the day (PR 0.57; 95%CI 0.35-0.94). On the other hand, those who wanted to increase their body weight felt more influenced regarding the amount of food consumed in meals (PR: 1.67; 1.08-2.59) and the number of daily meals (PR 1.66; 95%CI 1.04-2.67) (Table 3).

Table 3. Prevalence ratio (PR) and respective 95% confidence intervals (95%CI) of the perception of being influenced by cellmates regarding eating habits in the female incarcerated population (n=62). Natal, Rio Grande do Norte, Brazil - 2016.

Variable	Inmate is influenced by the type of food	Inmate is influenced by the amount of food	Inmate is influenced by the number of meals
Age range			
< 30 years	0.99 (0.63-1.57)	1.06 (0.66-1.71)	1.22 (0.73-2.05)
>= 30 years	1.00	1.00	1.00

Table 3. Prevalence ratio (PR) and respective 95% confidence intervals (95%CI) of the perception of being influenced by cellmates regarding eating habits in the female incarcerated population (n=62). Natal, Rio Grande do Norte, Brazil - 2016. Continues.

Variable	Inmate is influenced by the type of food	Inmate is influenced by the amount of food	Inmate is influenced by the number of meals
Lenght of incarceration			
=< 24 months	1.00	1.00	1.00
>24 months	0.91 (0.50-1.65)	0.78 (0.40-1.52)	0.68 (0.32-1.46)
Marital status			
Single / separated / widowed	0.73 (0.44-1.21)	0.70 (0.42-1.17)	0.66 (0.39-1.12)
Married / living with partner	1.00	1.00	1.00
Level of education			
Up to elementary school	1.34 (0.67-2.68)	1.61 (0.71-3.67)	0.98 (0.54-1.81)
High school or higher	1.00	1.00	1.00
Per capita family income			
< 0.25 minimum wages	1.18 (0.46-3.04)	1.18 (0.46-3.04)	0.99 (0.41-2.36)
>= 0.25 minimum wages	1.00	1.00	1.00
Visits occur regularly			
Yes	1.00	1.00	1.00
No	0.65 (0.40-1.07)	1.02 (0.48-2.16)	0.71 (0.38-1.33)
Frequency of receiving external food from visitors			
Frequent (weekly)	1.00	1.00	1.00
Infrequent (fortnightly, monthly, sporadic, never)	0.57 (0.35-0.94)	0.83 (0.50-1.40)	0.84 (0.48-1.48)
Visitor who brings external food			
Spouse and/or partner	1.00	1.00	1.00
Others	0.75 (0.40-1.43)	0.71 (0.37-1.37)	0.68 (0.35-1.31)
Occurrence of food exchanges in the cell			
Habitual	2.23 (0.83-6.00)	1.56 (0.69-3.54)	2.01 (0.74-5.45)
Sporadic / does not occur	1.00	1.00	1.00
Participation in the exchange of food in the cell			
Yes	1.54 (0.75-3.18)	1.19 (0.63-2.62)	1.79 (0.76-4.21)
No	1.00	1.00	
Estimated nutritional status			
Not overweight	1.00	1.00	1.00
Overweight	0.86 (0.54-1.36)	0.72 (0.45-1.12)	0.74 (0.45-1.21)
Satisfaction regarding prison food - quantity			
Satisfied	1.00	1.00	1.00
Dissatisfied or indifferent	1.58 (0.85-2.95)	1.52 (0.81-2.85)	1.40 (0.74-2.66)
Satisfaction regarding prison food - quality			
Satisfied	1.00	1.00	1.00
Dissatisfied or indifferent	1.10 (0.27-4.48)	1.07 (0.26-4.35)	NC
Satisfaction regarding prison food - taste			
Satisfied	1.00	1.00	1.00
Dissatisfied or indifferent	NC	NC	NC

Table 3. Prevalence ratio (PR) and respective 95% confidence intervals (95%CI) of the perception of being influenced by cellmates regarding eating habits in the female incarcerated population (n=62). Natal, Rio Grande do Norte, Brazil - 2016. Continues.

Variable	Inmate is influenced by the type of food	Inmate is influenced by the amount of food	Inmate is influenced by the number of meals
Level of satisfaction with the current body size			
satisfied/indifferent	1.00	1.00	1.00
dissatisfied	1.14 (0.73-1.79)	1.37 (0.85-2.18)	1.38 (0.83-2.82)
Desire to increase body size			
Yes	1.24 (0.80-1.93)	1.67 (1.08-2.59)	1.66 (1.04-2.67)
No	1.00	1.00	1.00
Desire to reduce body size			
Yes	0.81 (0.51-1.26)	0.67 (0.42-1.07)	0.57 (0.34-0.96)
No	1.00	1.00	1.00

Caption: NC = prevalence ratio not calculable due to the absence of responses in one of the categories of the variable.

Inmates who did not receive regular visits (PR: 0.59; 95%CI 0.35-0.99), who infrequently received external food (PR: 0.43; 95%CI 0.24-0.77), and whose food was brought by someone other than their spouse and/or partner (PR: 0.49; 95%CI 0.29-0.81) reported less frequently influencing the amount of food eaten by their cellmates. In contrast, the perception of their influence over the amount of food consumed and the number of daily meals of other inmates was four times greater among women who regularly participated in the exchange of food in their cells (PR: 3.98; 95%CI 1.09-14.52) (Table 4).

Table 4. Prevalence ratio (PR) and respective 95% confidence intervals (95%CI) of the perception of influence exerted by cellmates regarding food in the female incarcerated population (n=62). Natal, Rio Grande do Norte, Brazil – 2016.

Variable	Inmate influences cellmates regarding the type of food	Inmate influences cellmates regarding the amount of food	Inmate influences cellmates regarding the number of meals
Age range			
< 30 years	1.20 (0.74-1.95)	1.48 (0.88-2.48)	1.48 (0.88-2.48)
>= 30 years	1.00	1.00	1.00
Length of incarceration			
=< 24 meses	1.00	1.00	1.00
>24 meses	1.00 (0.54-1.84)	1.27 (0.72-2.24)	1.27 (0.72-2.24)
Marital status			
Single / Separated / Widowed	0.84 (0.47-1.48)	0.80 (0.45-1.42)	0.80 (0.45-1.42)
Married / Living with a partner	1.00	1.00	1.00
Level of education			
Up to elementary school	1.13 (0.55-2.30)	1.48 (0.64-3.39)	1.48 (0.64-3.39)
High school or higher	1.00	1.00	1.00
Per capita family income			
< 0.25 minimum wages	0.89 (0.45-1.77)	1.18 (0.53-2.62)	1.18 (0.53-2.62)
>= 0.25 minimum wages	1.00	1.00	1.00

Table 4. Prevalence ratio (PR) and respective 95% confidence intervals (95%CI) of the perception of influence exerted by cellmates regarding food in the female incarcerated population (n=62). Natal, Rio Grande do Norte, Brazil – 2016. Continues.

Variable	Inmate influences cellmates regarding the type of food	Inmate influences cellmates regarding the amount of food	Inmate influences cellmates regarding the number of meals
Visits occur regularly			
Yes	1.00	1.00	1.00
No	0.78 (0.42-1.45)	0.59 (0.35-0.99)	0.62 (0.38-1.03)
Frequency of receiving external food from visitors			
Frequent (weekly)	1.00	1.00	1.00
Infrequent (fortnightly, monthly, sporadically, never)	0.66 (0.39-1.23)	0.43 (0.24-0.77)	0.51 (0.29-0.91)
Visitor who brings external food			
Spouse and/or partner	1.00	1.00	1.00
Others	0.51 (0.31-0.85)	0.49 (0.29-0.81)	0.49 (0.29-0.81)
Occurrence of food exchanges in the cell			
Habitual	2.16 (0.80-5.82)	3.24 (0.91-11.57)	3.24 (0.91-11.57)
Sporadic / does not occur	1.00	1.00	1.00
Participation in food exchanges in the cell			
Habitual	2.65 (0.96-7.34)	3.98 (1.09-14.52)	3.98 (1.09-14.52)
Sporadic / does not occur	1.00	1.00	1.00
Estimated nutritional status			
Not overweight	1.00	1.00	1.00
Overweight	0.72 (0.46-1.12)	0.78 (0.48-1.26)	0.78 (0.48-1.26)
Satisfaction regarding prison food - quantity			
Satisfied	1.00	1.00	1.00
Dissatisfied or indifferent	1.09 (0.64-1.86)	1.46 (0.78-2.75)	1.23 (0.69-2.20)
Satisfaction regarding prison food - quality			
Satisfied	1.00	1.00	1.00
Dissatisfied or indifferent	NC	NC	NC
Satisfaction regarding prison food - taste			
Satisfied	1.00	1.00	1.00
Dissatisfied or indifferent	NC	NC	NC
Level of satisfaction with the current body size			
Satisfied/ Indifferent	1.00	1.00	1.00
Dissatisfied	0.95 (0.59-1.52)	0.89 (0.54-1.44)	1.00 (0.62-1.63)
Desire to increase body size			
Yes	1.38 (0.87-2.19)	1.56 (0.99-2.47)	1.38 (0.87-2.19)
No	1.00	1.00	1.00
Desire to reduce body size			
Yes	0.80 (0.50-1.29)	0.71 (0.43-1.15)	0.91 (0.56-1.46)
No	1.00	1.00	1.00

Caption: NC = prevalence ratio not calculable due to the absence of responses in one of the categories of the variable

The practice of exchanging food in the cell was greater among inmates with longer periods of incarceration (PR: 1.28; 95%CI 1.01-1.63) and among those who reported exerting influence over their

cellmates in relation to the type of food (PR: 1.39; 95%CI 1.04-1.85), quantity of food (PR: 1.48; 95%CI 1.11-1.97) and number of meals (PR: 1.48; 95%CI 1.11-1.97) (Table 5).

Table 5. Prevalence ratio (PR) and respective 95% confidence intervals (95%CI) of participation in cell food exchange by the female incarcerated population (n=62). Natal, Rio Grande do Norte, Brazil – 2016.

Variable	Participation in the exchange of food in the cell
Age range	
< 30 years	1.06 (0.81-1.39)
>= 30 years	1.00
Length of incarceration	
=< 24 months	1.00
>24 months	1.28 (1.01-1.63)
Marital status	
Single / separated / widowed	0.95 (0.71-1.28)
Married / living with partner	1.00
Level of education	
Up to elementary school	1.14 (0.77-1.68)
High school or higher	1.00
Per capita family income	
< 0.25 minimum wages	0.95 (0.59-1.51)
>= 0.25 minimum wages	1.00
Visits occur regularly	
Yes	1.00
No	NC
Frequency of receiving external food from visitors	
Frequent (weekly)	1.00
Infrequent (fortnightly, monthly, sporadically, never)	0.83 (0.64-1.08)
Visitor who brings external food	
Spouse and/or partner	1.00
Others	NC
Occurrence of food exchanges in the cell	
Habitual	NC
Sporadic / does not occur	1.00
Estimated nutritional status	
Not overweight	1.00
Overweight	1.26 (0.89-1.79)
Satisfaction regarding prison food - quantity	
Satisfied	1.00
Dissatisfied or indifferent	1.13 (0.82-1.56)
Satisfaction regarding prison food - quality	
Satisfied	1.00
Dissatisfied or indifferent	NC
Satisfaction regarding prison food - taste	
Satisfied	1.00
Dissatisfied or indifferent	NC

Table 5. Prevalence ratio (PR) and respective 95% confidence intervals (95%CI) of participation in cell food exchange by the female incarcerated population (n=62). Natal, Rio Grande do Norte, Brazil – 2016. Continues.

Variable	Participation in the exchange of food in the cell
Level of satisfaction with the current body size	
Satisfied/ Indifferent	1.00
Dissatisfied	0.93 (0.71-1.20)
Desire to increase body size	
Yes	1.12 (0.88-1.42)
No	1.00
Desire to reduce body size	
Yes	1.02 (0.80-1.31)
No	1.00
Are you influenced by your cellmates? - type of food	
Yes	1.19 (0.91-1.57)
No	1.00
Are you influenced by your cellmates? - amount of food	
Yes	1.08 (0.83-1.40)
No	1.00
Are you influenced by your cellmates? - number of meals	
Yes	1.23 (0.94-1.60)
No	1.00
Do you influence your cellmates? - type of food	
Yes	1.39 (1.04-1.85)
No	1.00
Do you influence your cellmates? - amount of food	
Yes	1.48 (1.11-1.97)
No	
Do you influence your cellmates? - number of meals	
Yes	1.48 (1.11-1.97)
No	

Caption: NC = Prevalence ratio not calculable due to the absence of responses in one of the categories of the Variable.

DISCUSSION

This study presents relevant aspects of the social role of nutrition in women incarcerated in closed regime. In an unprecedented way, it demonstrates that the number of meals, types, and quantity of food consumed throughout the day are associated with the level of influence that one inmate exerts over another and with food exchanges inside their cells.

In this context, it is worth highlighting the gender perspective, considering that the profile of incarcerated women and their visitation rates differ substantially from those of incarcerated men. As observed in this study, abandonment by family and/or partners is common due to several factors: difficulty in going on visits due to the distance from the prison; inability to miss work on visiting days; need to work to support the family of the inmate, since the woman currently incarcerated was often responsible for the income; embarrassment during pre-visit searches;¹⁷ and stigma associated with the social role of women, whose “mistakes” are seen as “heavier” or “harder to forgive” than when committed by men.¹⁸ A decrease in

the regularity of visits is common, as the period of imprisonment passes. The absence of this external support network impacts eating behavior and leaves inmates even more vulnerable to food insecurity and dissatisfaction with their diets.

Given the almost unanimous dissatisfaction with the food provided by the prison unit and the low frequency of receiving external food, it makes sense that this food brought by visitors becomes an object of affection. Prison meals are poor, rich in simple carbohydrates and fats, and with a low variety of fruits, vegetables and leaves.^{4,6,7,9} Furthermore, food suppliers disregard the local food culture, since the menus are standardized. If this type of food is already harmful to the physical and mental health of individuals who are not in prison,¹⁹ when it occurs in an environment of isolation and precarious living conditions, it favors the emergence of psychological illnesses such as depression and anxiety.²⁰

Visits are also reminders of their own identities, memories, affections, and autonomy, which is reflected in the choices of food that the inmates ask to be brought by their visitors.¹⁷ Thus, despite being quantitatively and qualitatively determined, external food increases self-esteem and impacts eating behavior, both of the inmates who receive it and of those with whom they share it.

As observed in this study, the frequency of receiving external food was associated with the perception of being influenced regarding the type of food consumed. On the other hand, the perception of exerting influence over the food consumption of other inmates was associated with the frequency with which the inmate received visits and external food, and with the person who brought the food, revealing the importance of external food as a tool of persuasion, control, and power.

Factors such as the desire to eat something specific that one does not have access to, the desire to eat more at a meal, and the long interval between the last meal of the day and breakfast are generally the fuel for exchanging external food.²¹ In addition, it is much simpler to make exchanges with those who are physically close,²² which can establish a habit of exchange and/or consumption.

Another relevant aspect related to food exchanges is the length of incarceration: the most participatory were those who had been imprisoned for the longest time. Conte²³ addresses some factors that determine the eating habits of low-income and low-education women, highlighting financial dependence and environmental factors. The author states that access to food is a product of local supply and purchasing power, which can lead to food monotony and conformism in relation to what will “be available to eat”.

Similarly, since the purchasing power of incarcerated women is zero, they are at the mercy of their environment and depend on what is offered by the prison unit and infrequent visits, as observed in this study. They need to adapt to what will “be available to eat”, due to their lack of autonomy over the daily menu and external food. The longer the period of incarceration, the more likely they are to report getting sick of the food, even the external one, since visitors cannot always afford the items required by the inmates, and the list of items is also predetermined in terms of quantity and quality. At this moment, exchanges and donations prove useful (albeit in a limited way) to increase food variety, access to foods with symbolic value, and ensure greater consumption throughout the day.

In addition to the act of eating, which is a survival strategy, commensality attributes meaning to the sharing of food.¹⁴ According to the dictionary,²⁴ “commensality” means “quality of commensal” and “camaraderie at the table”. Fischler,²⁵ however, understands it as one of the pillars of social organization since it results from the division and allocation of resources. Given that individuals do not usually share resources with those with whom they are not interested in strengthening ties, commensality is a way of initiating or maintaining relationships.¹⁵

Borges²⁶ exposes this factor by highlighting that (in most cultures) people choose who to share a meal with, and where and what they eat, which also demonstrates an encouragement of autonomy. In addition, the Ministry of Health²⁷ points out that *"eating regularly and attentively, in appropriate environments and, whenever possible, with some company"* is fundamental for an adequate and healthy diet, demonstrating that, in addition to what is consumed, the way in which meals are prepared is understood as an agent of health transformation.

In the context of prison, commensality also has other faces. The relationships established there are not always of affection, but rather of exchange of favors in search of security or privileges. Cunha²¹ explains, in his work based on interviews with inmates, that this population used the term "I get along with" instead of "I am friends with", demonstrating yet another aspect of differentiation in relationships built in incarceration. Exchanges and donations can be a way of maintaining good terms with someone who holds more power. It can also occur due to pressure or coercion.

Thus, compulsory proximity can distort commensality, reducing it to the act of eating together, to the detriment of the pleasure of sharing a meal. It is important to highlight that the illegal trade of food among inmates is a reality.^{8,28-30} The food received during visits becomes a form of exchange, also reducing the relational aspect of interaction and commensality.

Jomori³¹ established the environment and social relationships as determinants of food consumption. For a variety of reasons, people choose specific ingredients available in a given location to be enjoyed, and, through repetition, this becomes a habit. The habit of a society is its culture so what is disseminated among social systems can be a factor influencing consumption and social acceptance.³²

The same applies to the micro-society of prison units and their cells. The imposed coexistence determines that this is the center of the social cycle of the inmate, and giving in to influence can be a way of remaining socially accepted, or even safe/protected. In this environment, commensality also plays its social role of consolidating ties and, from this, consequently, the power of influence of the prisoner is increased, as well as the freedom for her to suggest or interfere with the quantity and frequency of food consumed,³² as evidenced in this study. Women who used to participate in food exchanges reported four times more influence over other inmates in relation to the quantity of food consumed and the number of daily meals.

On the other hand, refusing to participate in commensality can be read as a rejection of sociability. Cunha²¹ revealed that women deprived of liberty who refused to participate in these moments were socially excluded in the prison environment.

Another view of the influence that the prison environment exerts on the eating behavior of inmates is compulsory⁷ or desired modification of body size.³³

The incarcerated population has a high prevalence of overweight,^{9,34,35} which may have started before or during incarceration. In prison, weight gain is associated with an imbalance between food intake and energy expenditure, fueled by a lack of physical and/or recreational activities.^{7,9} There are also those who desire to increase their body size, as observed by Andrade et al.³³ in incarcerated women. According to the authors, this ambition, which is at odds with the reality of most women in freedom, may be motivated by the intention of achieving a more imposing and/or masculine image.³³

In this study, inmates who wanted to increase their body size reported being more influenced by their cellmates regarding the amount and frequency of food they consumed, even though they did so without technical knowledge of this type of recommendation. Many trust this suggestion because of the general knowledge that "eating too much makes you fat."³⁶ Others choose to follow it because "hanging out with"

someone “wise,” “influential,” or “powerful” can offer protection or even privileges. This scenario is different when it comes to the type of food, where the report of being more influenced was not significant, which could be justified by several factors. Interfering in the type of food consumed can be seen as a violation of their already limited autonomy. Furthermore, the food offered by prison units and the one brought by visitors is not very varied, so it would be a recommendation with little applicability. These aspects may also explain why inmates who wanted to reduce their body size did not feel influenced by their cellmates regarding the type of food, but rather regarding the number of meals per day.

The quantitative approach of this study did not allow us to identify details about the desires and motivations of inmates for increasing their eating satisfaction. Furthermore, the number of participants was small due to the high number of women who refused to participate, who justified this by saying that the research would not bring immediate changes to their eating habits. Furthermore, the sincerity of the responses may have been affected by the fact that the interviews were conducted with the inmates inside their cells, where other women could hear their responses.

Despite its limitations, this study presents original and unprecedented results in the national and international scenarios. The analysis presented here broadens the panorama of nutrition in an incarcerated population and sheds light on aspects that have yet to be explored, such as how food affects individuals and their social relationships in this micro-society. Therefore, it is useful for health professionals and decision-makers to understand the experiences of this population and to be able to adopt appropriate conduct to enforce the provisions of the Brazilian Penal Execution Law² and the principles of universality, comprehensiveness, and equity of the Brazilian Unified Health System.³⁷

CONCLUSION

Receiving visits and external food, as well as food exchanges between inmates, are important elements within prison units, both for their role in social relations and for their influence on qualitative and quantitative eating behavior.

The commensality built between incarcerated women is a strategy for seeking autonomy, maintaining identity, and consolidating relationships, and must be considered in the context of actions to promote physical, mental, and social well-being aimed at this population.

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Contributors

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