

Acculturation Process and Its Effects on Dietary Habits, Nutritional Behavior and Body-Image in Adolescents

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ABSTRACT

Previous studies have indicated that the acculturation process may contribute to psychosocial and health problems among immigrants through the mediation of acculturation stress. This study focuses on adolescents with immigrant background permanently settled in the Croatian region of Dalmatia and the influences of the acculturation process on their dietary habits, nutritional behavior and perceived body-image. The survey was conducted on the total sample of 510 adolescents (aged 14–19) including 52 first generation and 248 second generation immigrants. The analysis included dietary habits and questions of restrictive diet as indicators of unhealthy influence on physical health. Psychological factors (stress and self-esteem) have been found to be associated with dietary habits, diet behavior and dissatisfaction with body-image among adolescents with significant differences by immigrant status. Immigrant status is viewed as a risk factor for psychological distress and unhealthy dieting behavior. Research stresses the need to study the interaction between acculturation and health not only from an individual perspective, but also from the broader socio-ecological context of population subgroups.

Key words: anthropology, acculturation process, nutrition, body-image, adolescents

Introduction

The food is a basic need of all living species, and nutrition is an ideal model to study various biological and cultural adaptive processes. The biological and medical studies of nutritional habits are

directed towards the study of health risk and protective factors of each population group. On the other hand, the food studies in social sciences deal with the description of nutritional behavior within a

specific cultural group. In this study, we continue the anthropological and holistic research of nutritional habits that includes both of the above-mentioned approaches. However, our intention was to point out the influence of psychosocial factors, which in the recent works are associated with the formation of a dieting behavior¹⁻³.

Since nutritional habits are adopted early in life, and any changes connected with nutrition are hard and slow to accept, our research has been directed towards the study of dietary habits of adolescents with immigrant background. Adolescence is one of the most dynamic and complex transitions in the lifespan; the physical, psychological and social changes that occur during adolescence can markedly affect dietary habits and nutritional health¹. Physical changes including rapid growth and increase in fat and muscle mass place extra nutritional requirements on adolescents. This rapid growth depends on adequate nutrition, which is determined by the availability of sufficient quantities of food and the ability to digest, absorb and utilize food².

Adolescence is a period of crucial psychological and social changes as well. Those changes require adjustments in all of the aspects of daily living including language, school, health care, social life and mental development and psychological well-being³. Adolescents become focused on the physical appearance, i.e. perceived body image, and any deviation from the ideal figure can result in social withdrawal and poor self-esteem⁴. In that sense, satisfaction with one's own body image can act as a protective factor of their psychological well being, while body dissatisfaction can seriously affect health. Self-esteem refers to an individual's sense of his or her values or worth. Adolescents with a low self-esteem exhibit personality characteristics that are associated with poor self-concept that often

reflects poor social adjustment. Such physical, psychological and social changes may be associated with an increased vulnerability and could cause diet-related problems in very sensitive period of adolescence.

Earlier studies confirmed that the quantity of food consumed by the human is not determined by the biological factors only but that it is affected by cultural, social and psychological factors, as well^{5,6}. The dieting behavior is considered to develop under the influence of social and cultural standards that promote a marked slimness, the fatness being absolutely unacceptable among adolescents. The dieting behavior proved to be associated with various forms of psychological discontent and disturbances such as stress or dissatisfaction with *body image*. In persons on diet not for medical reasons such psychological forms are more pronounced.

Our research is based on the experience of recent forced migrations in Croatia that have led to acculturation situations between different groups with different cultural and ethnic background⁷⁻⁹. Acculturation as a process refers to immigrant (or minority) groups and their adoption of the behavioral and cultural traits of the host (or majority) group⁷. Acculturation can be manifested in external and internal forms. The external forms include speech, clothing, behavior, nutrition etc., while the internal forms include morality, value system, taste, emotions, etc. The external forms of acculturation appear after a relatively short time⁷ whereas the internal acculturation processes are more complex and traditionally rooted in the socialization process and this bear psychological implications⁸.

The results of the studies conducted in 1993 and 1995 in the Adriatic region of Dalmatia indicated considerable differences in dietary habits between the im-

migrant and host adolescents⁷. The research of dietary habits of immigrant adolescents showed that as many as 90.3% of immigrant adolescents do not like local regional food. Nutrition of immigrant adolescents complied with the continental nutritional habits characterized by a larger intake of meat, milky products and animal origin fats. The local Mediterranean (Adriatic) nutrition is characterized by a higher consumption of green vegetables, seafood, fish and olive oil.

Research hypotheses

The objective of the study was to explore the potential effects of the environmental influences and the acculturation process on dietary habits, dieting behavior and psychosocial adjustment.

We presumed that immigrants would significantly differ from the host in all measured variables. Consequences of successful acculturation process (adaptation) on dietary habits will be marked by a higher intake of regional and traditional Mediterranean food such as fish, seafood and olive oil. Such a dietary adaptation could be both a protective health factor and an indicator of adolescent successful emotional and social adjustment to the new environment.

We presumed that acculturation process would affect all psychological and social changes, which are an integral part of adolescents' development. Psychological and social maladjustment to the new environment could be a negative health factor through the mediation of unhealthy dieting behavior.

Subjects and Methods

Participants in this study were recruited from high schools in the coastal town and regional center of Split and on the island of Hvar in the Republic of Croatia. The study focuses on three

groups of adolescents. The first group comprises 208 host adolescents (93 males and 114 females), whereas the second group includes 52 (23 males and 29 females) adolescents with immigrant background from the neighboring countries (Bosnia and Herzegovina) and continental Croatia permanently settled in the region of Dalmatia, Croatia, during the last ten years. The third group comprising 248 (118 males and 130 females) adolescents whose parents immigrated and permanently settled in the place of residence are grouped as the second generation of immigrants. The mean age of the total sample was 16.37 and the mean acculturation period for the first generation immigrant adolescents was 8.3 years.

In this research we applied holistic approach to select relevant changes in adolescents' dietary habits and behavior. In that sense adolescents' dietary habits are viewed as a function of multiple levels of influence: individual, social and cultural level of influence, and level of physical environment.

Anthropometric measurements of height and weight taken from all participants were used to calculate body mass index (BMI). As a standard measure of participant's body size, BMI was calculated using following formula: weight in kilograms divided by height in square meters. In addition all participants completed the comprehensive survey instrument, which included: selected demographic questions (host and immigrant background), a scale measuring patterns related to dietary habits and dietary behavior (dieting) and questions related to the psychological functioning (perceived body-image, self-esteem, life satisfaction).

Dietary habits are measured using a 30-item scale¹⁰. The scale measures consumption frequency of ten nutritional categories: *fruits and vegetables, milk, meat, pasta, fat, sweets, »fast food«, empty*

calorie (tea and coffee) alcohol and »Mediterranean food« during the past seven days using a five-response Likert scale. The items are summed up and averaged to obtain the three levels of consumption: 1 (low), 2 (medium) and 3 (high). Chronbach's alpha for the samples in Croatia are .87 respectively. *Dieting practice* scale is measured on a three-point scale from 1 (lose or gain weight) to 3 (I am not trying to do anything concerning my weight)¹⁰. *Body satisfaction* is measured using a scale related to the respondent's desire to change something on his/her body¹⁰. The items are summed up and averaged to obtain the following dichotomous score: 1 (dissatisfied with body image) or 2 (satisfied). *Self esteem* is measured using a 10-item scale ranging from (1) strongly disagree to (4) strongly agree¹¹. Chronbach's alpha for the samples of Croatian born adolescents and immigrant adolescents in Croatia are .72 and .81 respectively. The *Satisfaction With Life Scale* (SWLS), measures life satisfaction as a cognitive-judgmental process¹². It assesses an individual's conscious evaluative judgment of his or her life by using the person's own criteria. The 5 items are answered on a four point Likert scale ranging from (1) strongly disagree to (4) strongly agree. Chronbach's alphas for the samples of Croatian born adolescents and immigrant adolescents in Croatia are .77 and .88 respectively.

Results and Discussion

The results that refer to biometrical assessment of adolescent's nutritional status showed significant differences in body mass index (BMI) between the host or immigrant population. We used NCHS/WHO¹³ data in comparing values of body mass index for male adolescents (Figure 1). The distribution of those classified as underweight was significantly higher for immigrants than for other ado-

lescents. Under the norm was 13.0% of male adolescent immigrants in both settings. The distribution of those classified as overweight was more significant for host adolescents (25.0% vs. 17.0%). Significant differences in body mass index (BMI) for female adolescents were also shown according to host or immigrant status in the place of residence (Figure 2). Having used NCHS/WHO data, the distribution of those classified as overweight was less for host and the second generation of immigrants than for immigrants of the first generation. Over the norm was 24.0% of female first generation immigrant adolescents. There is no significant difference between urban (coastal) or rural (insular) settings. According to these results it can be concluded that the adolescents with the first generation immigrant status in both genders differ most from the reference values. In another research conducted by the Public Health Institute most children whose nutritional status is under the norm (23.0%) live in the Vukovar-Srijem County¹⁴. Among these children the most numerous are those holding the exile, returnee or immigrant status. Such results indicate that in the future research of nutrition status of every population group, the origin, especially immigrant status of an individual has to be taken into account.

The results that refer to dietary habits showed significant differences in the consumption of »Mediterranean food« among host and immigrant adolescents. The effects of acculturation process measured by means of dietary habits indicated a significantly lower consumption of »Mediterranean food« (traditional, regional food: fish, seafood and olive oil) among the first generation of immigrants (Figure 3). The second generation of immigrants as well as hosts consume more regional and local traditional food than the first generation of immigrants. According to this result it can be concluded that the

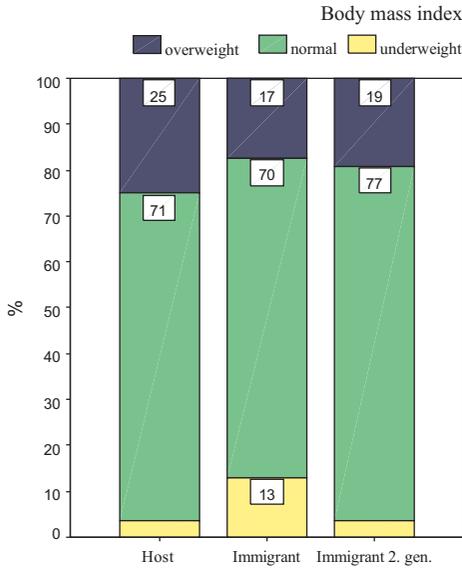


Fig. 1. Distribution of body mass index for male adolescents.

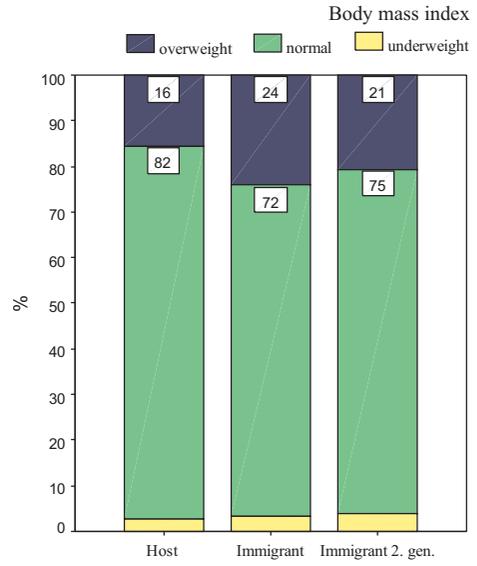


Fig. 2. Distribution of body mass index for female adolescents.

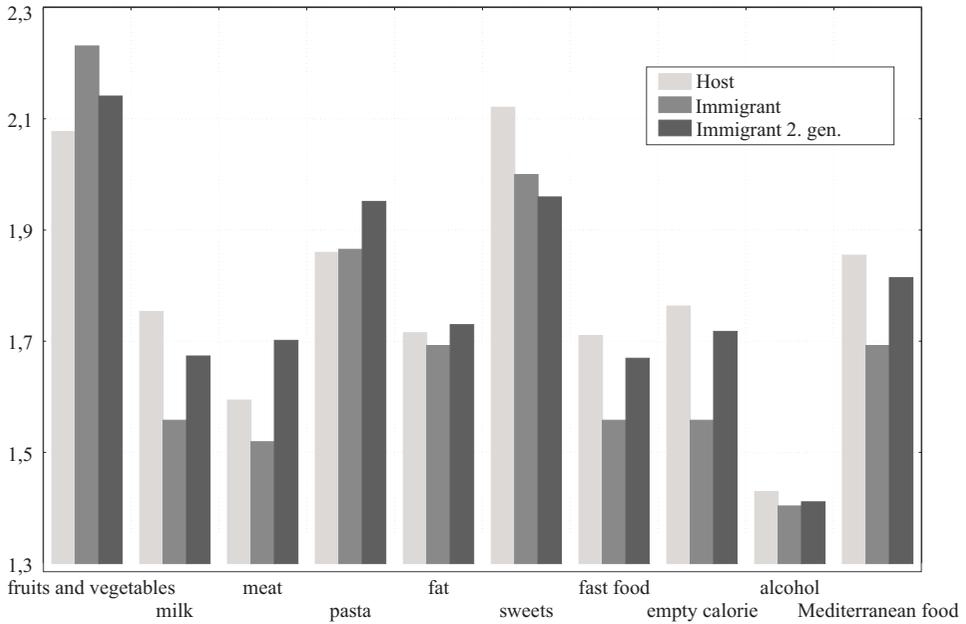


Fig. 3. Differences in dietary habits according to immigrant status.

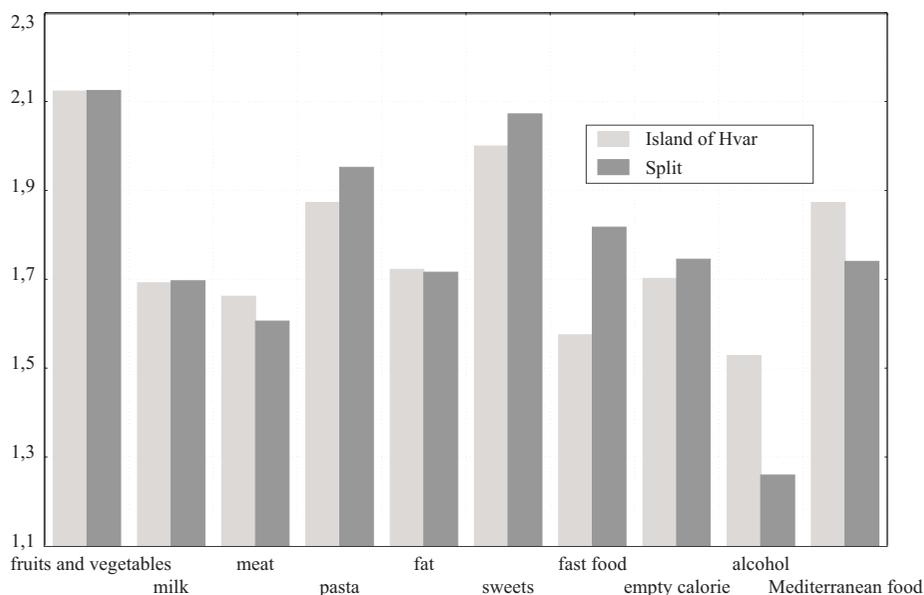


Fig. 4. Differences in dietary habits among adolescents living in urban and insular settings.

first generation immigrants did not change their dietary habits after immigration while in the second generation immigrants and the hosts the frequency of the »Mediterranean food« consumption is almost identical. Consequently, in spite of the fact that the dietary habits are primarily formed in accordance with the parental dietary habits, the very birth place, length of stay and socialization process in the place of residence affect the formation and changes of dietary habits. In other words, the whole generation has to pass for the dietary habits to be changed in compliance with the environment. The second issue that has to be pointed out is that the first generation of immigrants consume more fruit and vegetables but less meat, »fast food«, and milk. The reason for this partly lies in the fact that immigrants have a lower socio-economic status, which is sometimes not sufficient to ensure all dietary requirements. The differences in dietary habits

according to the place of residence are significant in the higher intake of sweets, »fast food«, coffee and tea by adolescents of the urban area of Split and a higher consumption of alcohol and »Mediterranean food« by adolescents on the island of Hvar (Figure 4). Such a variance in the dietary habits of the two groups confirms the difference in typical urban and rural settings. The adolescents from the island of Hvar more often consume the traditional Mediterranean food, so their nutrition can be described as more traditional and healthier than that of the adolescents from Split according to the World Health Organization criteria¹⁵. The most influential settings in the formation of adolescents' dietary habits include school, fast-food outlets, restaurants, markets and etc. in an urban (coastal) type of setting, while in rural (insular) setting the most important factor is family and tradition. These results confirm the assumption about different dietary

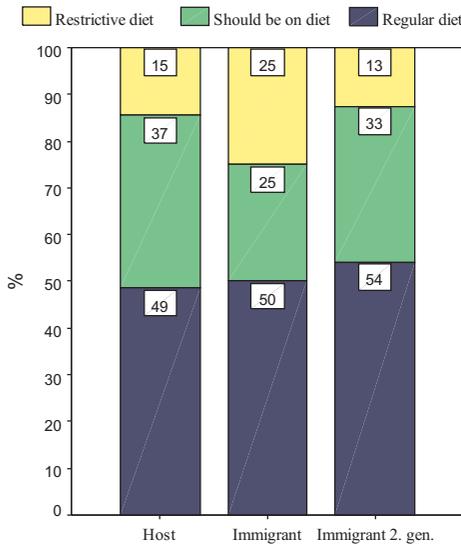


Fig. 5. Nutritional behavior according to immigrant status.

habits according to the environment¹⁶. In urban centers such as the city of Split, the habits of adolescents are formed under the influence of the urban dietary supply, which at the same time could be of lower quality and less varied.

The various forms of dietary behavior disturbances imply that the social and cultural characteristics play a more important role than it used to be thought before. The analyses show significant differences between host and immigrant population as far as dieting is concerned (Figure 5). 25.0% of immigrants are on diet and 25.0% think that they should be on diet. At the same time 15.0% of host and 13.0% of the second generation immigrants are on diet. These results confirm that dieting behavior is much more common among immigrant adolescents. Dieting behavior at that age can have a negative impact on nutritional intake and psychological well-being as well as on the overall health status.

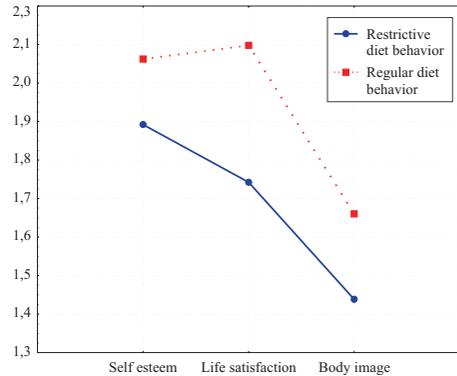


Fig. 6. Nutritional behavior and psychological variables.

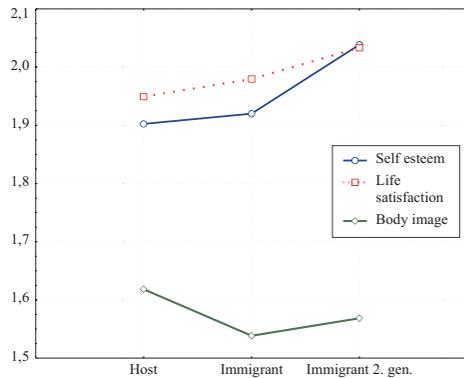


Fig. 7. Levels of psychological variables according to immigrant status.

The interaction between all psychological variables at the level of dieting behavior shows significant differences. Those adolescents who reported to be on diet scored the lowest values for self-esteem, life satisfaction and body-image satisfaction (Figure 6). Such results confirmed that the risky adolescent group with dieting nutrition habits generally are the adolescents with first generation immigrant status.

Among all three psychological variables measured in the study the perceived body-image has scored the lowest values for the whole sample (Figure 7).

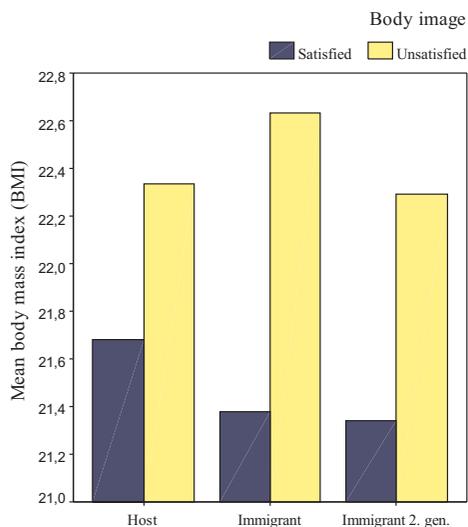


Fig. 8. Differences in stages of body image according to immigrant status.

Immigrants demonstrated the lowest level of perceived body-image. Host adolescents demonstrated the lowest level of self-esteem, while the second generation of immigrants demonstrated the highest level of life satisfaction and self-esteem. Body image variable is significantly correlated to the higher level of body mass index in adolescents (Figure 8). Adolescents with an immigrant status and those with the highest levels of body mass index demonstrate the highest level of dissatisfaction with body image as well. These findings demonstrate the strong correlation between nutritional status, body dissatisfaction and dieting behavior. In every analysis we conducted immigrant status makes a difference between adolescents. As we presumed, the acculturation process affects psychological, so-

cial and consequently biological changes, which are an integral part of adolescents' development. Our hypothesis that all measured variables and effects would differ in urban (coastal) and rural (insular) environments was not confirmed.

Conclusions

In anthropometrical variable of body mass index (BMI) a significant difference according to the immigrant status was found. The consumption of regional and traditional diet is much stronger in host and in the second immigrant adolescent generation in comparison with the first immigrant generation.

Restrictive dietary behavior is more common among immigrants and this group has consequently scored lower on the perceived body-image scale. According to psychological functioning immigrants demonstrate higher level of vulnerability.

The overall results show that environmental characteristics have an important impact on dietary habits in adolescent populations.

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UTJECAJ AKULTURACIJSKOG PROCESA NA PREHRAMBENE NAVIKE, PREHRAMBENO PONAŠANJE I PERCEPCIJU VLASTITOG IZGLEDA ADOLESCENTA

S A Ž E T A K

Prethodna istraživanja su pokazala da direktna posljedica akulturacijskog procesa, akulturacijski stres, može negativno utjecati na psihološko i zdravstveno stanje doseljenika. Ovo istraživanje usmjereno je na adolescente sa statusom doseljenika koji žive u dalmatinskoj regiji. Istraživanjem se pokušao utvrditi utjecaj akulturacijskog procesa na dinamiku promjena te formiranje prehrambenih navika i prehrambenog ponašanja. Uzorak čini 510 adolescenata (u dobi od 14–19 godina) od toga su 52 doseljenih adolescenata prve generacije i 248 doseljenih adolescenata druge generacije. Analize su uključivale prehrambene navike i dijetalno prehrambeno ponašanje kao indikatore zdravstvenog stanja. U istraživanju se potvrdilo da se prehrambene navike doseljenih adolescenata prve generacije i doseljenih druge generacije te domaćih značajno statistički razlikuju. Negativni psihološki čimbenici, stres i samopoštovanje, povezani su s dijetalnim prehrambenim ponašanjem i negativnom percepcijom vlastitog izgleda. Prema analizi psiholoških pokazatelja ispitanici sa statusom doseljenika su pokazali veću ranjivost. Na taj način je potvrđeno da je mogući rizični čimbenik dijetalnog prehrambenog ponašanja i zdravstvenog stanja u adolescenciji – porijeklo. Ovim istraživanjem je potvrđeno da se i zdravlje i akulturacija mogu sagledavati na individualnom nivou, ali i u širem društvenom i ekološkom kontekstu.