

## USE OF INSTAGRAM, BODY IMAGE SATISFACTION AND SELF-ESTEEM IN YOUNG WOMEN

*USO DO INSTAGRAM, SATISFAÇÃO DA IMAGEM CORPORAL E AUTOESTIMA EM  
MULHERES JOVENS*

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### Abstract

The aim was to assess the impact of Instagram's usage on young women's satisfaction with their body image and self-esteem. This is a quantitative cross-sectional study. A total of 329 women using Instagram, aged 18-24, answered this online survey. The data collection was through the RedCap platform. The research was published on social networks and was requested that other people would share on theirs. The method used was a non-probabilistic sample in order to reach as many participants as possible. The results showed that those who reported access to inspirational fitness content most frequently and compared themselves to other users showed decreased body satisfaction and self-esteem. Those who spend more than 2 hours per day on Instagram increased subjective feelings of salience and body fat perception.

**Keywords:** Instagram; body image; body satisfaction; self-esteem; woman.

### Resumo

O objetivo foi avaliar o impacto do uso do Instagram e a satisfação com sua imagem corporal e autoestima em mulheres jovens. Este é um estudo transversal quantitativo. Um total de 329 mulheres que usam o Instagram, com idades entre 18 e 24 anos, responderam a esta pesquisa online. A coleta de dados ocorreu por meio da plataforma RedCap. O método utilizado foi uma amostra não probabilística para atingir o maior número de participantes possível. Os resultados mostraram que aquelas que relataram acesso a conteúdos inspiracional fitness com maior frequência e se compararam a outras usuárias apresentaram diminuição da satisfação corporal e da autoestima. Aqueles que passam mais de 2 horas por dia no Instagram aumentaram a sensação subjetiva de saliência e a percepção da gordura corporal.

**Palavras-chave:** Instagram; imagem corporal; satisfação corporal; autoestima; mulher.

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## INTRODUCTION

A growing number of individuals have access to the internet, staying online with no time and place restrictions. The increased use, especially social networks, has been associated with impairments in leisure, work, family, and interpersonal relationships. The internet offers the opportunity to quickly connect to places, cultures, and people with the possibility of anonymity and to reach a mass audience. According to (Internet World Stats, 2020), more than 4 billion people worldwide have access to this technology, equivalent to 55.1% of the world population.

Currently, with the popularization of the internet and the easy access of this network through the use of smartphones, a significant part of the population has been using this resource to stay connected continuously in real-time - through social networks - with other people around the world (Wegmann et al., 2017).

Concomitantly, in recent years, society has experienced significant growth regarding the use of social networks. Facebook, Instagram, WhatsApp, Twitter, Snapchat allow the user to create an individual profile and share personal information, photos, and videos, have easy access to news and events and stay connected with family and friends the world. Despite the benefits of social networks, a growing number of users are suffering adverse consequences due to the excessive use of these applications (Wegmann et al., 2017; Yurdagül et al., 2019)

Instagram appeared in 2010 and is a free smartphone app in which the user can post videos and photos. Following other users' profiles allows interactivity between different groups (Moretti et al., 2016). The application is also used to share lifestyles, tips, experiences, and overcoming (Almeida et al., 2018). There is a significant increase in the number of profiles that share fashion, healthy eating, and sports practices that have become significant "opinion makers" on the social network (Son et al., 2019). Within this context, there is a search for belonging to the beauty and lifestyle standards stipulated by such profiles, which may increase the incidence of body dissatisfaction and even eating disorders in users. The app is currently also used as a marketing tool, which influences the consumer through service disclosures and reaches many people quickly and cheaply (Castro, 2014). In this way, Instagram has become a significant influencer in the choices of eating and living standards, inspiring changes through photos (Almeida et al., 2018).

An extensive body of research has documented detrimental effects on women's body image from exposure to idealized images displayed in traditional media formats such as fashion magazines and television, especially for women with already high levels of body concern (Ferguson, 2013). (De Carvalho et al., 2016), concluded through their research that social comparison is associated with body dissatisfaction and inappropriate eating behaviors in women. The Instagram app is one example because it is configured as a platform that allows instant access by individuals with content and contexts that are often unreachable. With the increase in comparisons with other people through social networks, it is possible to increase dissatisfaction rates with the body (Chang et al., 2019). This attitude of measuring themselves, opinions, and status based on other people is a cultural comparison (Festinger, 1954).

Women are healthy consumers of trends, mainly because they are inserted in a culture that values thinness. In general, being a thin woman means having success, competence, self-control, being sexually attractive (Stice et al., 1994). The ideal of thinness imposed on them is unattainable, which generates frustration and dissatisfaction that are more and more frequent. The media, then, can aggravate this scenario, as they reinforce the standard of beauty and convey it, exercising significant power over these women (Rochelle & Hu, 2017). The individual has body satisfaction

when his body is close to the body considered ideal by him (Cardoso et al., 2012).

According to (Bessenoff 2006), the use of social media and exposure to thin content significantly affects self-esteem, the concepts of weight, and users' mood. According to (Kim & Chock, 2015), visiting, liking, sharing, and checking other users' profile photos leads to negative feelings about one's own bodies.

(Ahadzadeh et al., 2017) researched two private universities in Kuala Lumpur, Malaysia, using self-discrepancy theories and self-scheme theories. They proposed that these two theories provide the link between Instagram and body satisfaction. Individuals who attribute importance to appearance can be concerned about the discrepancy between their real and ideal image. The results concluded that there is a negative influence of social media on the satisfaction of body image in young adults. Another significant result was that self-esteem moderates the influence of using Instagram on body satisfaction, mediated by self-scheme and self-discrepancy.

Other previous studies show that the use of the internet is correlated to the body's surveillance, the propensity to thinness (Tiggemann et al., 2013; Tiggemann & Slater, 2017), which culminates in disorders and eating disorders (Rodgers et al., 2019). These findings also support the study by Tiggemann and Slater (2013) that showed that more time spent online leads to higher internalization levels of the ideal of thinness, body surveillance, and motivation for thinness. Some of the study's hypotheses are: the increased use of Instagram decreases the satisfaction of the Body Image of women; increasing access to content linked to thin-ideal on Instagram decreases satisfaction with body image; increased use of Instagram worsens self-esteem. The aim was to assess the impact of the usage of Instagram on the satisfaction of young women with their body image and self-esteem.

## MATERIAL AND METHODS

The research is a quantitative cross-sectional.

### Procedures

Individuals were invited to participate in the research through online dissemination on social networks. The survey contained the following contents: the Consent Form, socio-demographic questionnaire, questionnaire about the use of Instagram, Body Attitude Questionnaire (Scagliusi et al., 2005), and Rosenberg's Self-Esteem Scale. The individual who agreed to participate in the survey accessed the online form on the Redcap platform (Harris et al., 2019) to answer it. The research was approved by the ethics committee, number 3.508.875, and CAAE: 14594919.400005544.

### Participants

The number of participants was 329 women aged 18 to 24, to cover a broader age group of young people who tend to use Instagram the most. Inclusion criteria were: having access to the internet, computer/tablet, or smartphone and be an active Instagram user to take the survey online. The sample was excluded people who were unable to understand the instruments and women who were not within the established age range.

The research was published on social networks and was requested that other people would share on theirs. The method used was a non-probabilistic sample in order to reach as many participants as possible.

## Data analysis

The analysis of the relationship between the variables collected was performed using the Statistical Software Package for Social Science (SPSS), version 22. Data were analyzed using statistical procedures of descriptive and inferential analysis. Tests were used to compare groups such as Student's T-test, effect size using Conhen's D and Pearson's bivariate correlations.

## Measures

### *Instagram Usage Questions*

The instrument "Instagram Usage Questions" was used (Fardouly et al., 2018), consisting of four questions related to users' use of the platform.

Two questions are related to the participants' average usage time, they are: "How often do you check Instagram (even if you're logged in all day)?" and "Overall, how much time do you spend on Instagram on a typical day?". One question is related to how often participants see fitness inspiration images on Instagram, which are defined by (Tiggemann & Zaccardo, 2015), as photos inspiring ideas related to diet and fitness. The question used was, "How often do you see fitness-inspired images on Instagram?".

In the last question, participants reported the frequency with which they compared their physical appearance with people on Instagram. "When you are looking at photos of people whom you follow on Instagram, how often do you compare your appearance with theirs?"

### *Rosenberg's Self-Esteem Scale*

The Rosenberg Self-Esteem Scale with adaptation by (Hutz & Zanon, 2011) for Brazil was used to assess the participants' self-esteem. The scale showed ten items, six referring to a complimentary view of yourself and four referring to a self-deprecating view. The response options are "Disagree", "neither agree nor disagree", and "agree".

### *Body Attitude Questionary (BAQ)*

The "Body Attitude Questionary" (BAQ) questionnaire is an instrument developed to assessing disorders of attitudes towards body image in adult women is a self-report scale and has 44 items. The BAQ has six subscales that bring different aspects concerning the body, which is: 1) attractiveness - the individual's perception of being physically

attractive; 2) disparagement - feelings of disgust and aversion related to the body; 3) feeling fat - feelings about body adiposity in general; 4) salience – a value of personal relevance given to weight and body shapes; 5) lower body fatness – the perception that the lower limbs of the body are fat; 6) strength and physical fitness – the individual perception of these aspects. Sentences are answered on a Likert scale of five points ranging from "strongly disagree" to "strongly agree". The questionnaire has good convergent validity in its translation to Portuguese, reproducible (Scagliusi et al., 2005).

## RESULTS

Table 1 shows participants' data with an average age of 21 years ( $SD = 1.66$ ). On average, the participants had 927 followers and followed 804 people on Instagram. The average daily time of using the app was 96 minutes, with 70 minutes deviation standard.

Table 2 shows the socio-demographic and economic data of the participants. In the marital status data, it is possible to observe: single (92.4%); white ethnicity (66.9%); have some religion (62.1%) and have a family income of more than ten minimum wages. All women who participated in the survey have an account on the social network Instagram.

Table 3 presents the scores for the body attitude questionnaire variables and the Rosenberg's self-esteem scale with the frequency they compare and see inspirational Fitness content. The hypothesis tested in this comparison was that increased access to content linked to the thin ideal (fitness content) on Instagram decreases satisfaction with Body Image. The groups that Never or Sometimes See inspirational fitness content on Instagram with people who almost always see inspirational fitness content on Instagram. Independent sample t-test showed the following differences: women who see fitness inspiration almost always / always have lower rates of Self-esteem  $t(324) = 2.93$ ,  $p = 0.004$ , Cohen's  $d = 0.35$  (small effect); Attractiveness  $t(324) = 2.17$ ,  $p = 0.031$ , Cohen's  $d = 0.26$  (small effect). Higher disparagement rates  $t(324) = -2.60$ ,  $p = 0.010$ , Cohen's  $d = -0.31$  (small effect); Feeling Fat  $t(324) = -4.61$ ,  $p = 0.000$ , Cohen's  $d = -0.45$  (small effect).

Table 3 also tested the hypothesis that women who compare themselves more often with other people on Instagram have less satisfaction with Body Image and self-esteem. The group of women who reported to Never or Sometimes comparing themselves to other people they follow on Instagram compared to women who Almost Always or Always compare themselves with other people who follow on Instagram. Student's t-test independent study showed the following differences: women who reported comparing almost Always / Always have lower Self-Esteem indices  $t(324) = 7.17$ ,  $p = 0.000$ , Cohen's  $d = 0.65$  (small effect).

Table 4 shows two groups of women: those who report spending up to two hours per day on Instagram; and those who report spending more than two hours accessing Instagram on a typical day. The tables show the variables scores of Satisfaction With Body Image and participant's Self-esteem. The hypothesis tested in Table 4 was that the increase of the time using Instagram reduces the satisfaction rates with Body Image. Student's t-test independent study showed a significant effect: participants who reported spending more than two hours per day on Instagram have higher rates in the variables Feeling Fat  $t(324) = -2.32$ ,  $p = 0.022$ , Cohen's  $d = 0.26$  (small effect) and Salience  $t(324) = -4.36$ ,  $p = 0.000$ , Cohen's  $d = -0.41$  (small effect).

Table 5 shows the bivariate correlations between the variables associated with the results of the Rosenberg's

Self-Esteem Scale, Body Attitude Questionnaire, time of use, and followers in the Instagram app. Pearson's correlation showed a significant correlation between the daily time of Instagram usage and the number of people participants follow ( $r = 0.126$ ,  $p$

## DISCUSSION

The article's purpose was to assess the impact of Instagram usage on Body image satisfaction and self-esteem of young women. The results indicate that women who report to access more fitness-inspired content and compare themselves more often with other Instagram users have: lower Self-esteem and Attractiveness, greater disparagement, feel fatter, and have more salience have greater feelings of Lower Body Fatness. The larger effect sizes were found among women who compare themselves with greater frequency in the variables of Self-esteem, Salience, Feeling fat, and disparagement. Other data obtained was that women who spend more than 2 hours per day on Instagram feel fatter and feel salient with their Body Image. The correlations indicated that the amount of time spent daily on Instagram's use increased the number of followers. The number of followers was related to greater Self-esteem, Strength and Physical Fitness, and Disparagement. However, with less attractiveness. The number of people the participants follow was positively correlated with more excellent Attractiveness and Strength and Physical Fitness.

Social comparison refers to the tendency of using other people as sources of information to determine how we are doing relative to others (ability comparison), or how we should behave, think, and feel (opinion comparison) (Festinger, 1954). Because of the rise of social networking sites social comparisons take place at an unprecedented rate and scale. There is a growing concern that these online social comparisons negatively impact people's subjective well-being (Verduyn, P., Gugushvili, N., Massar, K., Täht, K., & Kross 2020).

Cross-sectional (Niu et al 2018; Sherlock & Wagstaff 2019) and longitudinal (Verduyn, LeePark, Shablack, Orvell et al. 2015; Yang, Holden & Carter 2018) studies on social comparison on social network sites demonstrate that these comparisons typically result in decreases in subjective well-being. An increasing number of studies reveal that indicators of subjective well-being may also be predictive of social comparison on social network sites (Frison & Eggermont 2016; Cohen et al., 2017; Karazsia & Crowther, 2010)). Especially people suffering from depressive symptoms and related perceptions of low self-esteem are vulnerable to engaging in damaging social comparisons on subjective well-being (Appel, Crusius & Gerlach 2015; Jang, Park, N., & Song 2016; Tiggemann, Hayden, Brown, & Veldhuis 2018). However, several studies revealed that social comparisons on social network sites do not always result in declines in subjective well-being. First, the comparison dimension matters as research showed that social comparison on social network sites is not associated with negative emotional consequences when the comparison is focused on opinions rather than ability (Yang, Holden & Carter 2018). On the other hand, because Instagram is an image-oriented social network, it is possible that it has a worsening effect on mental health among young women.

Understanding the relationship that social media impacts on young people and on the perception of their own body image seems to be an emerging theme. Increasingly, social media influences the lives of young people and their mental health. A meta-analysis that examined 77 correlational and experiments suggests that exposure to mass media, which show versions of idealized bodies, links to increased issues related to the body in women (Grabe et al., 2008). Other research has also recognized that media and image exposure to fitness inspiration negatively affect women's body image and mood (Aziz, 2017; Cohen et al., 2017). In (Cohen et al., 2017) showed that activities based on

Facebook photos and content focused on an appearance on Instagram are related to several concerns about body image, while social networking sites' general consumption is not. Content related to the appearance of the body can encourage greater comparison between people. Girls between the ages of 18 and 24 are one of the most vulnerable groups to develop eating disorders and a higher risk for trait anxiety and depression. It can be understood that this is a vulnerable group to social media that only focus on aspects about image and appearance. Review studies already indicate that greater time spent on online social networking promotes self-harm behavior and suicidal ideation in vulnerable adolescents (Memon, Sharma, Mohite & Jain 2018). Greater time spent on social networking websites led to higher psychological distress, an unmet need for mental health support, poor self-rated mental health, and increased suicidal ideation. Greater time spent on online social networking promotes self-harm behavior and suicidal ideation in vulnerable adolescents (Memon, Sharma, Mohite & Jain 2018).

This study showed that people who see fitness content more often have lower self-esteem and lower rates in all Body Attitudes Questionnaire variables. According to (Tiggemann & Zaccardo, 2015), fitness inspiration images are described as sources of inspiration and motivation. However, a study examining this phenomenon found that overexposure to this type of content can have unwanted and negative consequences. The media share many images of idealized bodies that can trigger upward social comparison in many people, increasing body image (Lewallen, 2015). The sharing of idealized bodies is frequent on Instagram, which has a more significant amount of content on fitness and ideal of thinness. (Engeln et al., 2020) surveyed that this hypothesis is also congruent with our results. They showed evidence that networks that mainly use people's images increase users' tendency to think more about their appearance and negatively impact young people's body image. These platforms provide many opportunities for comparisons based on appearances (Engeln et al., 2020). According to the results, fitness content could be promoted by some Instagram app accounts that could trigger women to feel worse about their bodies (Prichard et al., 2020). (Raggatt et al., 2018) also reported that approximately 25% of fitness content followers reported feeling inadequate in comparing people's appearance in fitness content images.

(Yang, 2016) explored associations between loneliness, Instagram activities, and the role of social comparison theory in this context. One of the findings was that users with high social comparison guidance did not benefit much from interaction with social network sites. The findings showed that interaction and navigation on the Instagram app were related to lower loneliness. Simultaneously, the transmission of videos and stories on Instagram was associated with greater loneliness. The study concluded that the use of social networking sites could relate to greater and lesser loneliness, depending on how the platform is used (Yang, 2016). In the study by (Lup et al., 2015), the findings suggest that social comparison can mediate the association between wellbeing and social networks.

The results related to the time of use on Instagram showed significant differences among participants who indicated staying longer on Instagram, who have higher salience levels and feel fatter than those who spend less time. The result is also congruent with some data in the literature. According to the survey results (Lira et al., 2017), survey participants who accessed Instagram more than ten times a day increased the chance of dissatisfaction with the body image compared to those who accessed monthly. The study showed a relationship between the use and frequency of social networks and body image. Simultaneously, girls who spent more than 20 hours per week on the internet were more susceptible to body dissatisfaction. These data agree with our results that showed greater Salience and Feeling Fat in participants who stay more than 2 hours on Instagram. (Tiggemann et al., 2013), Through their research, the time spent on the internet was significantly related to the internalization of the ideal of thinness, body vigilance, and the

desire to lose weight. Girls who spent an average of 1.5 hours per day on Facebook were more concerned with body image than non-users.

(Tiggemann & Slater, 2017), in a longitudinal study, also suggest a relationship between social media and body image. The number of "friendships" on the social network was a perspective predictor in increasing the beauty search. We found a negative correlation between the number of followers, the perception of Strength Physical Fitness, Attractiveness and Disparagement.

The study has limitations as well. The research was carried out in the online format, indicating false answers or omission of information. Study participants generally belong to a specific socioeconomic range and skin color, which does not necessarily reflect the variety of realities present among young people aged 18 to 24. Despite the results obtained, other variables should be considered within each woman's individual and personal context. The research was a thorough self-report and contained a subjective character of self-perception. Many other variables are associated with the context and format of the Instagram application usage that could not control or know through the chosen data collection method. It is essential to continue more research with diversified methods for a more reliable understanding of the topic studied.

## CONCLUSION

In conclusion, the time spent, frequency of comparison, and the type of content women follow may be linked to lower self-esteem and attractiveness, a greater feeling of salience, feeling of fat, and disparagement of Body Image's perception. Social comparison, despite being something natural from a phylogenetic point of view, took great proportions with the advent of the internet. Social Networks Sites that focus especially on images increase to comparison mainly between young women who already suffer cultural pressure due to their physical appearance. This group of young girls already have a sociocultural vulnerability due to their body image. Comparison is leveraged with continued use and increased comparison through social networking sites. Using the social network, such as comparing oneself with other people or access to fitness content, can decrease self-esteem and satisfaction with body image. Instagram usage time also worsens some aspects of body image in women in this age group studied. Young women between the ages of 18 and 24, with more than 2 hours access to Instagram daily, who compare themselves frequently with others and have access to fitness-inspired content seem to be a dangerous junction for increasing body image dissatisfaction. Dissatisfaction with body image can worsen mental health indices and directly interfere with the psychosocial development of these young women.

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## Lista de Anexos

Table 1 - Age and Instagram usage data

	N	Average	SD
Age	329	21	1,66
Number of followers	326	927	760
Number of following	326	804	512
Daily activity (in minutes)	253	96	70

SD = standard deviation

Table 2- Socio-demographic data of the participants

Variables	N (%)
<b>Color of skin</b>	
White	220 (66,9%)
Non- white	109 (33,1%)
<b>Marital Status</b>	
Single	304 (92,4%)
With a pair	25 (7,6%)
<b>Religion</b>	
With a religion	204 (62,1%)
Without a religion	124 (37,8%)
<b>Family monthly income</b>	
Up to \$715,00	87 (26,4)
Between \$716 to \$1609,04	90 (27,4%)
More \$1610,00	147 (44,7%)

Table 3 - Comparison between the frequency of women who see Inspiration Fitness and compare themselves with other users Questionnaire

Instruments	Variables	See inspirational Fitness content on Instagram		Student T-test	Cohen D	Compares with other people on Instagram		Student T-test	Cohen D
		Never / Sometimes (n=228)	Often / Always (n=98)	P-Value	Effect Size	Never / Sometimes (n=202)	Often / Always (n=124)	P-Value	Effect Size
Rosenberg Self-Esteem Scale	Self- esteem	M(DP) 0.10 (0.9)	M(DP) -0.24 (1.0)	0.004**	0,35	M(DP) 0.28 (0.8)	M(DP) -0.47(1.0)	<.001**	0,81
Body Attitude Questionnaire	Attractiveness	0.07 (0.9)	-0.18 (1.0)	0.031**	0.26	0.21 (0.8)	-0.35 (1.0)	<.001**	0,60
	Disparagement	-0.09 (0.9)	0.21 (1.0)	0.010**	-0.31	-0.27 (0.8)	0.44(1.1)	<.001**	-0,76
	Feeling fat	-0.16 (0.9)	0.38(0.9)	<.001**	-0.55	-0.25 (0.9)	0.42 (0.9)	<.001**	-0,72
	Saliency	-0.14 (0.9)	0.34 (0.9)	<.001**	-0.51	-0.31 (0.9)	0.50 (0.9)	<.001**	-0,89
	Lower body fatness	-0.16 (0.9)	0.37 (0.9)	<.001**	-0.55	-0.19 (0.9)	0.32 (1.0)	<.001**	-0,53
	Strength and physical fitness	-0.08 (0.9)	0.18 (1.0)	0.027*	-0.27	0.07 (0.9)	-0.12(1.0)	0.083	0,20

Obs: Z-score

Table 4 - Comparison of the Self-Esteem Scale and the Body Attitude Questionnaire variables concerning Instagram's time on a typical day.

Instruments	Variables	Time spent on Instagram on a typical day		Student T-Test	Cohen D
		Up to 2 hours on a day (n=196)	More than 2 hours on a day (n=130)		
		M(sd)	M(sd)	P Value	Effect size
Rosenbeg Self-Esteem Scale	Self- esteem	0.00	-0.02	0.793	0.030
Body Attitude Questionnaire	Attractiveness	0.04	-0.07	0.285	0.121
	Disparagement	-0.04	0.06	0.345	-0.107
	Feeling fat	-0.10	0.15	0.022*	-0.260
	Saliency	-0.19	0.29	<.001**	-0.494
	Lower body fatness	-0.08	0.12	0.064	-0.210
	Strength and physical fitness	0.013	-0.030	0.702	0.043

Table 5 – Correlation between Time spent on Instagram, followers, Self-esteem, and Satisfaction with Body Image.

	1	2	3	4	5	6	7	8	9	10
1. Time spent on a day	—									
2. Number of followers	0.060	—								
3. Number of following	0.126*	0.631*	—							
4. Self-esteem	0.054	0.175*	0.103	—						
5. Attractiveness	-0.009	-0.207*	0.127*	0.533*	—					
6. Disparagement	-0.003	-0.157*	-0.078	-0.616*	-0.590*	—				
7. Feeling fat	0.074	-0.001	0.056	-0.392*	-0.404*	-0.580*	—			
8. Saliency	-0.086	-0.010	-0.045	-0.476*	-0.503*	0.627*	0.697*	—		
9. Lower body fatness	0.076	-0.004	-0.016	-0.253*	-0.306*	0.464*	0.621*	0.567*	—	
10. Strength and physical fitness	0.120	0.126*	0.128*	0.386*	0.332*	-0.310*	-0.112*	-0.156*	-0.040*	—

