Social Media usage, Quality of Sleep, Need of Belonging, Perceived Stress predicts Body Appreciation

Abstract

The definition of body appreciation is the way people are satisfied with their body, and how they perceived it. Body appreciation is linked with body image, and self esteem and represents a serious threat to teenagers or young adults. Statistically over 91% of women feel unhappy about their body and tend to choose unhealthy methods of coping. Participants of this study will be only women because of their predisposition of low levels of body image.

This unhealthy methods of coping lead to different psychological or psychical issues, as obesity or depression and in some cases to suicidal thoughts or substance abuse.

The paper examines how social media, stress, quality of sleep and need of belonging can predict body appreciation. The aim of this study is to find valid predictors which cause low levels of body appreciation, so further research could be able to find improved solutions on it. Social media usage affects body perspective throughout famous people being as upward models. Depending on how stress is perceived, social media usage could accentuate it, and can play an important role in the body perspective.

Need of belonging will be examined assuming high levels could represent a strong need to be active in society physically or virtually. Sleep will be examined considering the physical influences on the body and the neurological influences on the brain.

Introduction

In daily people lives there are many environmental factors which influence their idea of their body(e.g., US: Ata et al.2007; Australia: McCabe and Ricciardelli 2001). Body appreciation has serious consequences on people health, affecting not only their perceived idea of their psychical body but also leading to mental issues. Statistically one in three men experienced anxiety because of the way they looked, but 9 in 10 women are unhappy with their body and how they look(reference). Body dissatisfaction is more prone to females than males, but it is more dangerous during adolescence, where self-consciousness, self-awareness, and preoccupation of body image is increased (Harter 1993). Body dissatisfaction is a strong predictor for clinical eating disorders(Stice 2002), but also is correlated with symptoms as depression, mood affections, suicidal thoughts(Ata et al. 2007; Jones 2004; Triggerman 2005).

Social media plays an important factor setting high level, unreal standards which are hard to acquire by adolescents. This represent a drive for thinness, big muscular masses but most importantly the objectification of the body. Social media usage on how it affects body image, will be analysed based on the social comparison model, and the objectification theory.

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Social media does not only affect people that uses, but also creates prosocial values of what the body image should be. Stress could accentuate either the effect of social media on the body, or could be perceived from friends or family members sustaining these models. Low quality sleep could predict body unsatisfaction, from physical consequences of it, but also from a brain chemistry perspective.

Higher levels of need of belonging would mean that the person wants to belong in all types of social interactions, and social media is a social interaction. In order for someone to be part of a group should be in concordance with the group attributes, and here this need could shape the perceived idea of the body. All these 4 variables will be deeply explained below each one as a predictor for body image, and then they will be analysed all together to see the correlation between them. The aim of this study is to produce valid predictors which causes body unsatisfaction. Knowing what predicts low level of body image, could help in finding better solutions for solving the problem.

Teenagers have a strong tendency in giving tips or valuing friends physical characteristics((US: Jones and Crawford 2006; Ireland: Lawyer and Nixon 2011). Nowadays social media usage is statically arising with over 80% percent of the entire population having at least one social media account, and over 52% checking daily social notifications. The usage in social media is even higher in teenagers between 13-17, with a percentage of 91% having at least one account, and 52% using daily social platforms to interact(3). This could represent a risk in adults but young teenagers are the one more prone to it.

Social media influencers tend to promote healthy lifestyle, strong gym usage, healthy diets, body thinness, big muscular mass, which do not always reflect reality. Posting only a picture to show actual body status or lifestyle status, creates a false illusion because the pathway of getting there is not always easy and requires motivation and resilience. Socials influence not only the person that use it, but also creates a pro-social model of what the body should look like.

Social media can lead to serious negative consequences when not used correctly. This could affect mood, influence body image, lead to depression, dysfunctional diets, obesity, or in some cases even to strong cosmetically procedures(Netherlands: Woertman and van den Brink 2009, reference for diets).

People tend to post only the best pictures of themselves, and in some cases they even occur to editing this pictures to become in trend(4). The context of editing pictures and posting only the "best" of them in circumstances where it doesn't reflect their real self, could be interpreted in many ways. Identity development is a process of exploring different possible selves(5), in this case social media could play an important role(5). Identity is constructed throughout social interactions people have with the environment or with society. As well, perceived identity is constructed throughout what people think others would think of them(reference). In the case of social compassion theory, females tend to value their characteristics based on comparisons with others, and also this is applied on comparing with social media models(7).
In the case of social media, posting pictures that don't reflect real life could be caused by different motives. Firstly, people would select their pictures to be in concordance with what is promoted on socials, or could represent pictures hiding all their perceived defects. In both cases this would lead to the creation of a false self, where psychical characteristics are not the same as reality and could influence the perception of the real self. Social media upward model consists in people selecting their targets based on upper models or on lower models seen on social networks(7). People when not being able to reach their targets represent a strong meaning of not being in the standardised perceived form of a "regular body image", and this could threaten their perceived idea of their body(7).

Research's showed that higher social media usage predicted body dissatisfaction in females, but body dissatisfaction was not a predictor for social media usage(8). This could mean that people with low body image aren't in the search of social media, but social media influences the body image. All of this factors from not being able to reach targets of social models, or not being able to be at the same physical standards characteristics with persons in trend, predicts negative unhealthy behaviours as exercise dependence(UK:White and H alliwell 2010), unhealthy dietary forms(D. A. de Vries (*)), or even cosmetically

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procedures. The theory of social comparison model, in concordance with the theory of the development throughout social interactions could lead to an infinite cycle where the person is continuously unsatisfied in not reaching his goal, and not being able to compare his characteristics with other trending models, or with social network values of the body. Considering ongoing situation with covid lockdown, this lead to a higher use of social media which was found to be correlated with lower self-esteem and body dissatisfaction(Cohen, Newton-John and Slater 2017; Fardouly and Vartanian 2016; Holland and Tiggemann 2016; Sherlock and Wagstaff 2019). Future similar possible scenario of lockwodn could be expected, and results in low self esteem and body unsatisfaction are expected to be negative strengthen with usage of socials.

Puberty, school, high school, pressure of looking in a certain way, friends comparison are just a small list of all the environmental stressing factors that teenagers face. It is certain that stress plays an important role in the mental health development of teenagers(8). The transition from children to teenager and from teenager to young adult come with different hormonal levels, and could be positively associated to the body and to behaviour development but also negatively associated(8). Puberty and teenager phases consist of hormonal increases and are linked to emotional, cognitive, behavioural, and affective development(8). Body appreciation includes physical, emotional, cognitive evaluation of the body. Body appreciation does not represent just the size or the appearance but also the emotional understanding of it(10). Stress results from the inability to face or unable to cope with mental or emotional events.

Adolescent phase come with a multitude of new and different tasks and responsibilities from academic to emotional that represent a higher stress intake for this phase(11). These stressors affect more the emotional and behavioural life(11) than the academic one, and this represent an increased risk factor for adolescents. Females are the ones more prone to it(11). Western females tend to follow as a body image model values as a thin waist, graceful and tend to report stressors from friends, life partners and even parents(12)(b*). As mentioned above, social adolescent interaction partially consist on tips and looking advices, and this could accentuate stress pressure. Girls tend to cope with environmental stressors with unhealthy ways which is associated with internalisation of the problems(11). Research in female adolescents showed that eating disorders and body dissatisfaction are associated with accumulated internalised stress of puberty and dating(12).

Therefore, all environmental and the internalisation coping method leads to maladaptive behaviours which in this case could be eating disorders pathology, which are positively correlated to body satisfaction and with other serious mental health issues(a*). Considering that life partners, friends represent a stress intake for females not being able to reach the prosocial body image, it is possible to assume that the root of the problem is the pro social image, which in this case is influenced by social media(thin waist, graceful, objectification).

From this therefore is understood that social media produces a social body image model, which is followed by girls adolescents, and the social media product of body image is the main cause of the stressors by romantic partners, or by friends, or by comparing the self with it, which leads to unhealthy and internalised coping methods as eating disorder which are linked to body appreciation. Social media accentuates levels of internalisation, clinical eating disorders and body dissatisfaction(13). This means that girls teenager going throughout changing phases of life, already have to face new stress which leads to internalisation or body dissatisfaction. Social media accentuates more the internalisation by establishing a social body image model. Therefore social media along stress could be interpreted as higher levels of body dissatisfaction than received separately.

Teenagers value their self throughout comparing themselves with others models, and construct their targeted or perfect self from an upward or downward model, in this case from social media. As mentioned above, girl teenagers in trying to reach their model reach to unhealthy diets, eating rarely or not at all. Anorexia is positively linked to Instagram usage(14), and anorexia has been linked to low levels in the 5HT neurotransmitter, which is linked to a dysfunctional body image interpretation(15).

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An important aspect of teenager mental development is sleep, this could help them in having a cleared understanding of their emotion, thoughts, feelings, and understanding how they work from a conscious perspective. Statistics show that over 70% of teenagers have problem sleeping(16). Several studies confirm the correlation between quality of sleep and poor mental health, and mental health issues are arising throughout teenagers(Tzichnsky & Shochat, 2011). As well, poor sleep is also correlated with various disorders, as eating disorder obesity, or depression, or even suicidal thoughts (George et al., 2013). Understanding how sleep influence and causes mental issues throughout teenagers could help them understand why sleep is important for their cognitive and emotional development.

As mentioned above, Stress lowers levels of 5HT neurotransmitter, and it was showed that this is linked to a dysfunctional perceived body image. In the case of poor sleep the same neurotransmitter 5HT has been found out to be lowered, causing the same effects as stress (34), which are a dysfunctional perceived idea of the body image. Considering that stress and sleep, causes lower 5HT levels, it is possible to say that the two predictors in concordance could have lower 5HT levels, which would mean lower levels of body appreciation. Studies show that prolonged stress levels could lead to sleep disorders(18). The relation between sleep and stress has been showed that is a causal relationship in which lack of sleep increase stress levels, and excessive stress affect sleep quality and duration(21).From this it is possible to assume that is enough one of the two variables to exist, which will determine the appearance of the other, and will result in lower body appreciation. One variable not only will activate the other, but negative body appreciation could be understood in concordance to both variables.

Skin makes part of the body cutaneous image, and influence positively or negatively the levels of body appreciation. Lack of sleep, have important consequences on the physic appearance of a person, especially on the skin and the cutaneous body. Cutaneous body image refers to how a person perceive their nails, skin, and hair(22).
Tiredness and lack of sleep causes different face-characteristics changes as wrinkles, or lines around the eyes, or accelerate the process of ageing(19), or even effects on hair. Studies have found out that cutaneous body of a person affects the perception of the body and influences the body appreciation(20). People with low quality sleep showed higher dissatisfaction of the cutaneous body appearance than people with more healthy sleep(20). Therefore, it is possible to assume that another consequence of lack of sleep could be physical cutaneous changes, which as mentioned above influence body appreciation.

Photographs of people became important from a social media perspective, and they play an important role in shaping and exploring the construction of the selves, in comparing with other people, and in trying to become trendy, all of this being linked to body appreciation. Photographs with wrinkles, or with effects of poor sleep are considered less attractive on social media, therefore knowing the importance of pictures presented on social media, skin effects of low quality sleep could accentuate effects of the social media outcomes by being another obstacle in reaching the appearance model. Social media promotes a light and healthy cutaneous appearance, along with a multitude of routines to be able to perform it. Not being in the social media promoted cutaneous standards would have negative consequences on body appearance.
Considering the importance of appearance, and as mentioned above how is influenced by social media usage or by stress and knowing that sleep deprivation can lead to skin changes and to lower 5HT, it is possible to assume that both the effects of sleep can accentuate social media and stress. Social media can be accentuated by the skin changes. Stress along with lack of sleep produce lower levels of body appreciation than individually, because of their influence on serotonin. Therefore, lack of sleep plays an important role in causing other predictors as stress, reinforces the effects of social media, and the physically(cutaneous image) and cognitive(serotonin levels) consequences influence body appreciation.

Teenagers are highly sensitive to social exclusions especially in they development phases. Considering the usage of social media networks, social networks can provoke different feelings of social exclusion. In following, it will be explained how social exclusion affects teenagers, what are the causes to make the consequences of the exclusions higher,

how it is related to need of belonging and to social media. Need of belonging refers to the human emotional need to be socially accepted from the groups which want to be part as work colleagues, or emotional relationships(23). The need to belong theory sustains that humans have a fundamental need to be accepted by groups, therefore means that humans should establish and maintain different relationship throughout life. As mentioned above, throughout relationship interactions helps their understanding of their self consciousness and helps the construct and the development of their selves. When talking of social media, there are multiple cues that reflect social acceptance, and this cues help users fulfil their need to belonging. Acceptance cues on social media can be number of likes, popularity/trending, comments, emojis, or being tagged in pictures(24). Tagging represents mentioning someone's name in a picture or in a comment, and all users can see the link created.In real life, acceptance cues of a group can't be understood easily, a person doesn't know if has been liked by the other in-group persons, or if they really enjoyed the discussion, or jokes while in social media being tagged by a person could represent signs of acceptance in the relationship. Being tagged solves the uncertainty of social acceptance in a group, and can have positive outcomes. Being tagged could make the person understand that is a valuable social interaction partners and at the same time could solve the uncertainty of being accepted or not by the group. This could improve the self-esteem and full-fill the need of belongings(25). At the same time being tagged makes even other social network users to see and this could be understood that the person is an interesting social friend(25). Opposite being not tagged on social media have opposed consequences, and can influence self-esteem negatively and affect the social acceptance and belongingness need(25). Being tagged represents social acceptance, analogous being untagged could represent social rejection. On social media, there exist the possibility to untag your own profile(for various reasons: as not wanting the picture to be on the profile, or picture is not attractive enough), from the perspective of the tagger this can break the social bond created leading to feelings of rejection(25). The need to belong describes the need to be socially accepted in a relationship or groups by the others. Levels of belonginess refer to the importance attributed to be socially accepted, higher levels would mean the person gives higher importance while low levels the opposite. People with higher need of belonging would attribute high importance to all possible social interactions, this including social media. There are multiple causes of why a person is not tagged or is even untagged from a picture or from a commentary. The difference between a person with high or low need of belonging is the difference on which the event of being socially excluded is being perceived. Persons with high levels of need to belong have a certain sensitivity to experiences correlated to social exclusion(25), and they have different reactions to experiences regarding social exclusions(25).

Considering that a person with higher levels of need of belonging gives more importance to being socially accepted, a so social exclusion by being untagged could be perceived more importantly and could present a serious esteem threat than a person with low levels of need of belonging. One of the factors that influence positively and helps maintain body appreciation is unconditional social acceptance(26), in the case of social media as discussed above social acceptance is conditioned by various acceptance cues that provide the user popularity, or to be socially desirable. Individuals with a high need to belong motivates the usage of social media and the comparison of their their selves with other in order to conform to the social imposed body standards(25).Considering that need of belonging motivates social media usage and social comparison, and that conditional social acceptance influences negatively body appreciation, it is possible to conclude that need of belonging influences negatively body appreciation throughout social media usage where acceptance is based on different cues.

To socially conform represents a process in which people because of the pressure from groups, will change their behaviour and look to be more admired and confirmed by others(26)

Social rejection and social acceptance plays an important role In shaping body appreciation, and in concordance with high levels of belonging a rejection affects negatively body appreciation. Studies found out that conformity is more visible is persons with high need of belonging(26). Protecting the body by rejecting unrealistic body images contributes

to keeping a secure body image(26)(1a). For example, In the case of a person with high level of belonging which in order to be socially accepted conforms to a change of look or behaviour leads to invalidation of 1a. Confirming to in-group by changing look or behaviour has been found that is positively correlated to internalisation(26, Varatnian 2009), which is already a premorbidity of stress consequences on female teenagers. As mentioned above, internalisation is one of the coping style responses to stress which has been found out that is linked to unhealthy eating behaviour. Therefore, high levels of belonging means high importance to be socially accepted, in cases of rejection people with high levels of belonging could conform in order to be socially accepted, finally conformity leads to an insecure body image which causes internalisation and leads to unhealthy eating behaviours. High levels of need of belonging is an important predictor in the equation of body appreciation because this leads to internalisation which has its own negative effects over body image and also motivates the usage of social media and the comparison theory. To conclude, social comparison theory in concordance to internalisation produces a higher threat to body image than individually.

To conclude, the study is trying to validate the following theories. Below will be resumed the theories along with the predictors and key points on which the study is sustained.

Social media is an influential predictor in the equation of body appreciation. Social standards of body image and behaviour are being developed throughout social media models. The popularity of the social media model(user) is defined with the help of different filters as popularity, number of followers or number of likes. This models promote the body image standards. In terms of women standards as a thin waist and objectification of the body is being promoted, in case of man unhealthy muscular masses are being promoted. Not only, body standards are being transmitted throughout social media but also different extreme behaviours as intense workouts, or intense dieting to help maintain the body. As mentioned above in all this four predictors this social media body image plays an important role. Social media usage accentuates the social comparison theory in which the desire to obtain this "social body image" is increased. In the case of this study, as discussed teenagers phase influences on social comparison theory and the effects promoted by social media, because the self is in a continuous development phase. Sleep is an arising problem, throughout teenagers, and consequences affect the cutaneous body but also brain chemistry. Considering the importance of how teenagers are perceived(social development theory) cutaneous image is very important. Therefore, sleep can be a predictor to body appreciation, but also in concordance with social media creates stronger negative consequences. From a neurological perspective sleep influences the 5HT neurotransmitter which has been proved to create a dysfunctional idea of the body. Therefore, lack sleep can be a strong predictor of body appreciation influencing throughout cutaneous consequences but also throughout brain-chemistry. Lack of sleep is a statistical arising problem throughout teenagers, therefore considering its importance is necessary.

The teenager development phase of life come with new responsibilities and new experiences and this leads to stress. Stress is a problem from teenagers to adolescents. Stress is related to eating disorders which are a main predictor of body appreciation This predictor influence negatively the internalisation of problems in cases of female teenagers, and internalisation plays an important role in constructing the self and also is associated with eating disorders. Social media motivates the internalisation and predicts eating disorders. Stress and social media could have stronger negative results because both predictors influence in the same way the causes of what leads to body depreciation. From a neurological perspective stress affects the 5HT neurotransmitter which leads to body depreciation. The same neurotransmitter is negatively correlated with both stress and sleep, having a stronger consequences together on body appreciation.

Throughout social media, the need of belonging has been explained above. The levels of belonginess are correlated to how strong the person perceive the experience of social rejection. The study considers as social rejection, the "untagging" acceptance cue explained above. This represents acceptance cues that in real life would not be possible to see. Analogously untagging someone or not being tagged at all, it was sustained that have opposite effects of being socially accepted. Since socially acceptance plays an important role in shaping body appreciation, the study considered that the need of belonging

influences how the person experience social rejection which is corrected to body appreciation. A person with higher need of belonging will perceive a social rejection more threatening, which will lead to a stronger affect on body appreciation. Concluding it is possible to assume that the predictors could be intercorrelated between them, producing higher negative results together compared to individually.

Participants

Participants in the study are all females. Female participants are more prone to internalisation, social media comparison which are expected to be predictors to body appreciation. Female participants were selected throughout mail advertising, and they must be over 18 years old, and part of the Undergraduate course of University of Westminster. Participants being part of student phase of life allows the key theories of the study to be in concordance with the ages in which the effects are more statistically popular. There were no racial interference in selecting participants. There are no ethnic differences. There are no psychical differences.

Methods and Design of Study

The study is a quantitative research based on a survey with 5 different scales, measuring Stress, Social media Usage, Quality of Sleep, Need to belong to a group, and Body Appreciation. The theory to be validated is that that Stress, Social Media Usage, Quality of Sleep and Need to belong to a group could predict Body Appreciation.In order to find the equation of prediction and validity of each predictors a multiple linear regression will be used throughout SPSS software. The linear regression used will be an enter method where all predictors will be analysed at the same time.

The Independent Variables are Stress, Quality of sleep, Social media usage, and need to belong to a group while the predicted variable is body appreciation.

Below each Scales will be shorty analysed. Body Appreciation is the predicted variable and the scale used for measuring it is Body appreciation scale(BAS; Avalos, Tylka, & Wood- Barcalow, 2005), the scale has 13 questions and scores vary from 0=never to 5=always. The scale is reliable and valid throughout significant cronbach

alpha result(Zarate, Marmara, Potoczny, Hosking & Stavropoulos, 2021). Study on the development of the Body Appreciation Scale showed as valid related to appearance evaluation, body preoccupation and body dissatisfaction. Stress is measured throughout the perceived stress scale(Sheldon Cohen, 1993), this has a crunch alpha exceeding .7 which proves validity os the measure((Perceived Stress Scale: Reliability and Validity Study in Greece," Eleni Andreou, Evangelos C. Alexopoulos"). The items 4,5,7,8 will be reversed in SPSS according to the development of the stress scale.

Social media usage will be measured with the help Social Media usage scale(Jenkins-Guarnieri et al.,2013), the scale has a cronbach alpha exceeding .7 (Quinlan et al., 2011, p. 114) which proves the validity of the measure. The scale measures the usage of Facebook. Quality of sleep is measured throughout Sleep Quality Scale (C. Shin, YI 2006) which has a cronbach alpha ranged from 0.61 to 0.9(YI, SHIN & SHIN, 2006), the scales examines the effects of sleep on everyday task, as long as its quality. Need of belonging is measured with the Need to belong scale (Leary, M. R.. (2013) which is associated to the desire for acceptance and belonging.

Participants will be recruited throughout advertised emails to University of Westminster students. Participants will have the possibility to forward the e-mail message towards other students of University of Westminster. The mail will contain a link(url) which will direct them toward the online survey study . Even if mails are advertised towards female and males, only females participants would be able to complete the survey on the website(There will be a tick box asking for gender, in case of Males gender, the survey will not be possible to be completed and will be automatically redirected to the final page of the survey). In the mail will be specified towards who the study is, what is the study about and readers will be asked if they could forward it.

Participants after entering the link will have the following path. Possible participants in the mail will be informed about their anonymity and if data is published it will not be identifiable with them.

Participants firstly will be asked to sign the tick boxes, where they will confirm their consent followed by their gender and age. As already mentioned in the e-mail ,gender box will exist on the survey website where only females will proceed. After participants will read the consent online, and they will have the possibility to tick each box of the consent form, in order to continue all boxes must be ticked. In the case of not ticking every box of the consent form, participants will not be able to continue.

Data will be fully anonymous, and after analysed the data will be stored password protected. Data will be protected by an encrypted password file on personal computer. The survey has a duration approximate of 8-12 minutes and represents no harm to the participant. The participant has the right to close and to leave at any moment the website and their results will be immediately deleted. The sample of this study is convenience sample, and the sample size is of 85 participants(number of predictors : 4, power : 0.8, a err prob: 0.05, effect size : 0.15).

Results

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	perceived_stress_total, need_belong_total, sleep_quality_total, social_media_total[b]	.	Enter

a. Dependent Variable: body_appreciation_total
b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.536[a]	.287	.235	9.76934	.287	5.541	4	55	<.001

a. Predictors: (Constant), perceived_stress_total, need_belong_total, sleep_quality_total, social_media_total
b. Dependent Variable: body_appreciation_total

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2115.195	4	528.799	5.541	<.001[b]
	Residual	5249.205	55	95.440		
	Total	7364.400	59			

a. Dependent Variable: body_appreciation_total
b. Predictors: (Constant), perceived_stress_total, need_belong_total, sleep_quality_total, social_media_total

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Correlations Zero-order	Partial	Part	Collinearity Statistics Tolerance	VIF
1	(Constant)	4.454	17.126		.260	.796					
	social_media_total	.393	.222	.256	1.769	.082	-.084	.232	.201	.619	1.615
	sleep_quality_total	.084	.217	.046	.387	.700	-.077	.052	.044	.914	1.094
	need_belong_total	-.632	.297	-.289	-2.125	.038	-.234	-.275	-.242	.698	1.432
	perceived_stress_total	1.386	.332	.523	4.178	<.001	.467	.491	.476	.826	1.211

a. Dependent Variable: body_appreciation_total

Descriptive Statistics

	Mean	Std. Deviation	N
body_appreciation_total	42.6000	11.17230	60
social_media_total	31.1333	7.27071	60
sleep_quality_total	31.1667	6.12073	60
need_belong_total	33.6833	5.11724	60
perceived_stress_total	32.1500	4.21790	60

Correlations

		body_appreciation_total	social_media_total	sleep_quality_total	need_belong_total	perceived_stress_total
Pearson Correlation	body_appreciation_total	1.000	-.084	-.077	-.234	.467
	social_media_total	-.084	1.000	.203	.548	-.364
	sleep_quality_total	-.077	.203	1.000	.116	-.270
	need_belong_total	-.234	.548	.116	1.000	-.172
	perceived_stress_total	.467	-.364	-.270	-.172	1.000
Sig. (1-tailed)	body_appreciation_total	.	.262	.279	.036	<.001
	social_media_total	.262	.	.060	.000	.002
	sleep_quality_total	.279	.060	.	.188	.018
	need_belong_total	.036	.000	.188	.	.094
	perceived_stress_total	.000	.002	.018	.094	.
N	body_appreciation_total	60	60	60	60	60
	social_media_total	60	60	60	60	60
	sleep_quality_total	60	60	60	60	60
	need_belong_total	60	60	60	60	60
	perceived_stress_total	60	60	60	60	60

Interpretation

The predictors social_media_total, sleep_quality_total perceived_stress_total, need_of_beloning where introduced in a multiple linear regression having as Independent Variable body_appreciation_total. The results will be interpreted next.

The Anova table revealed a significant model of tasks ($F_{(4,55)}$ = 5.541, p =.001). The model explains 28.7% of variance in one variable is explained by the other(R^2 = .287). The R^2 value is considered to be moderate.

The table of coefficients shows that only perceived_stress is a strong predictor having sig. < .001b while the others predictors are not.
For every increase of 1SD in need_belong_total the body_appreciation_total decreases in .289 SD.

Discussion

Below, each of the predictors will be analysed individually.
Stress results show that it is a strong predictor in predicting body appreciation while the other predictors are not. Stress measure positively correlates only to body appreciation and this invalidates part of the theory mentioned in the Introduction. Since high stress levels represent high intake of stress, and high levels body appreciation represent positive attitudes towards body, a positive correlation would mean that higher levels of stress would mean higher positive attitudes towards the body. Limitation could be because academic stress levels being in the last year of university could interfere.
As mentioned in the Introduction, stress plays an important role in shaping and affecting body appreciation attitudes. Stress has many psychical consequences which affect sleep, and the hormone correlated to need of belonging, but also is strong correlated to unhealthy eating behaviour which are found to be a principal reason of negative attitudes towards body. Stress being positively correlated to body appreciation invalidates part of the theories brought sustaining stress as a predictor. The theory started from a presumption of stress being being accumulated throughout puberty and hormonal changes, as well from facing new challenges and responsibilities. What affects body appreciation are not levels of stress but the coping styles of it. What the study hypothesised is that internalisation because of stress affects hormonal levels, sleep, dieting, and unhealthy behaviour which lead to negative body_appreciation. Considering that students were third year undergraduate students, high levels of stress not corresponding to low levels of body appreciation, could be caused by the adaptation and forming healthy coping style by being already exposed to stress in terms of academic stress, throughout antecedent years. It is possible to assume that for an undergraduate student coping style evolve facing similar repeated stressful situations from academic situations. This could explain why there is a positive correlation between stress and body appreciation. Stress is negatively correlated to social media usage, sleep, and need of belonging.
Need of belonging is negatively correlated to body appreciation. As mentioned in Introduction need of belonging affects body appreciation because a person with higher

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need of belonging would perceive an exclusion as more threatening and also would tend to acquire unhealthy strategies to be part of different social network groups. Need of belonging has a moderate positive correlation with social media, this means that as need of belonging increase also social media increases. This could be explained because a person with high levels of need of belonging want to be part in all part of social groups, including social network groups. Usage of social media is positively correlated to need of belonging and this could be a consequences of social interactions not being fulfilled. Sleep has a weak negatively correlation with body appreciation and stress, and this would mean that higher negative levels of sleep would decrease stress, but also would decrease body appreciation. On examining the correlation between sleep and body appreciation, sleep has been demonstrated to be a factor that affects not only cutaneous image of the body, but also neurotransmitter which affects the image on body image. Sleep is negatively correlated to stress, this means that higher levels of negative quality of sleep would suggest low levels of perceived stress.

To conclude, it is possible to asume that sleep along could play a role in the correlation body appreciation. Even if correlation doesn't prove causation, in finding the root problems of body appreciation sleep could play an important role.

Perceived stress is the only significant predictor of the regression. Stress consequences has been described in relation to the coping styles of it, especially the outcomes of internalisation. Internalisation outcomes have been demonstrated to affect also social media usage, unhealthy eating behaviour or extreme diets. The phases of change from puberty teenager to young adult all come with different hormonal changes, but also with responsibilities, stress being mandatory in this phases. To lower the outcome of stress, there should be more focus on the coping strategies of teenagers than trying to avoid it. There could existed interferences of stress levels which do not displayed causes of negative quality of sleep. Considering that participants were students undergraduates in the last year, all working on assignments could influence stress. For further research, it would be interesting to find papers related to a sample which would require both gender and to see if there is a significant difference of the outcomes depending on gender. To have a better understanding of the causes of body appreciation, a qualitative study could have different outcomes than a quantitative one, understanding in deep the root of the problem. Another limitation of the study could be the demographic position and the culture of the person, studies show that depending on culture or demographic position, body image values are different(11). There could be added in calcul different variables as usage of phone, levels dieting and healthy lifestyle, levels of resilience and motivation, this could all interfere the effects of social media. As well, to understand solutions there could be examined a regression with various behaviour that led to improvements of body appreciation.

Conclusion

The paper studies a multiple regression in order to find if variables inserted represent valid predictors for the Body Appreciation Image. The Independent Variable especially among teenagers and young adults represent a statistical increasing problem, with outcomes varying and affecting eating behaviour, mental issues, social relationship. In order to find valid solutions for negative body appreciation the study tried to found correlations between the predictors and showing what their outcomes are. Stress significance and level of correlations validates the theory presented on this predictor as long with sleep.

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