# THE RELATIONSHIP BETWEEN SELFIE ADDICTION AND PSYCHOLOGICAL WELL BEING AMONG UNIVERSITY STUDENTS

## DR. WAJHIA YASIR & DR. SUMAIRA NAZ

DR. WAJHIA YASIR

Hazara University. Mansehra, Pakistan

DR. SUMAIRA NAZ

Department of Psychology Hazara University, Mansehra

## Abstract

Although taking selfies has become a popular trend among teenagers in m the world, concerns have been raised about the negative personality traits linked with it, however, empirical research that explores the selfie-associated psychological characteristics of individuals is still limited. the present study aims to investigate the relationship between selfie addiction and psychological wellbeing of university students Solanki selfie scale and Bradburn psychological wellbeing scale (Bradburn, 1969). The 3001 university students were given the questionnaires. There was significantly negative correlation found between selfie addiction and psychological well being among university students (-.299\*\*) and females were found to be at higher level of selfie addiction then males (M=149.97, SD=58.24). The findings of the study can be helpful for clinical psychologist, counselor sand educational psychologist.

Keywords: Selfie, narcissism, attention seeking, self-centered behavior, loneliness

## INTRODUCTION

The advent of scientific revolutions in today's technological world brought a standard shift in almost every aspect of human history. Our life styles, norms and mores are transforming radically as we undertake our journey into the era of electronic media. From social networking sites to mobile phone usage, from podcasts to digital cable TV, this new media has never been more essential. These essential technologies however have associated negative consequences in the form of medical disorders where, "Behavioral Addictions" is one of the important aspect which is unfolding as one of major psychotic issue in the field of medical community.

Since the past few years, the most prevailing trend is sharing and uploading photographs of all sorts especially selfies on different social networking. But with the passage of time and

easy approach to mobile cell phones this trend has turned into a behavior that is associated with many several threats to psychological well being of individuals.

## **Selfie Addiction**

A selfie can be described as a self-portrait of a person taken oneself, usually with a Smartphone or a webcam, and which is frequently shared with others on social media (Sorokowski et al., 2015). In September 2002, Steven Wrighter coined the term "selfie (Pearlman, 2013).

Within the last years, taking selfies has become an extremely popular activity, especially among young people. In a survey, 98% of the 18–24-year-old interviewees stated that they had taken selfies at least once in their lives and 46% revealed that they had shared a selfie that day (Katz and Crocker, 2015).

Over a period of time, technological advancement has given us new addiction disorders. Last two decades were known for computer addiction disorder and internet addiction disorders. Smartphone has intruded in our daily life so much that without which we cannot survive. Many of today generation smarphones are equipped with high resolution camera, we call it "selfie" camera. Though people were fond of taking photographs of their own and others since many decades, with selfie camera it has lead to an extreme effect. It is coupled with posting the selfie photographs (selfie) on social networking sites. Further they are waiting for comments of friends and others. This has lead to chain of reactions leading to a complex addiction disorder which we may easily call as Selfie addiction disorder. Oxford English Dictionary had described "Selfie" as word of the year in 2013 (Wade, 2014). The term hashtag was never been more popular and the inimical ramifications are both detrimental and counterproductive

Today, people are making their private lives public through the extensive use of social media like Facebook. Twitter and Instagram, only to remain in the public eye. They share their everyday actions and feelings visually through selfies and let the public comment on them. On top of that, the technology has further augmented this vicious circle. In both ways either through the increasing boom of Facebook and Instagram or through the extensive usage of smartphones, the selfie-taking is easier than ever, causing this action to be classified as a genuine mental disorder. The scientific community of the psychologists has named this disorder as "Selfitis".

## **Border line**

Taking up to two selfies per day but posting on social media.

## **ACUTE**

Taking atleast three images of selfie per day and posting them on social media.

### **CHORONIC**

Uncontrollable urge to take and post up to six photos per day.

# **Factors Affecting selfie addiction:**

# **Narcissism and Social Networking Sites:**

Research proposes that narcissistic tendencies have increased due to the over use of social networking sites and Internet inclinations (Twenge & Foster, 2010). Therefore, a vast amount of research has investigated narcissism within the most used social networking site, Facebook.com, (Mehdizadeh, 2010; Buffardi & Campbell, 2008). Buffardi & Campbell (2008), investigated narcissism on Facebook profiles. In this study, narcissistic personality reports were collected and were coded on content viewed on subjects' profiles. It found that narcissistic traits correlated with higher levels of social activity i.e. large number of Facebook friends, wall posts and had more self-promoting satisfied. In addition, strangers were invited to view profiles, where they mediated the most narcissistic profiles to have more social collaboration and photos being attractive. Yet, the personality of strangers viewing the profiles may have had an effect on how they notice the current profile which may have limited this study

# **Impact of Selfies on Self-Esteem Levels:**

Similar to narcissism, self-esteem is another common factor which is often associated with selfie addiction. Both narcissism and self-esteem are directly related to each other and inevitably the selfie addiction. The concept of self-esteem is generally defined as how a person assesses him or herself in the eye of the general public (Coopersmith, 1967). Since social media is capable of embellishing or exacerbating this evaluation of oneself, it causes a substantial effect on the self-esteem of a person in both positive and negative mannerStudies indicate that individuals with lower self-esteem are more inclined to remove their photos from social networking websites and

are less likely to upload their selfies than those with higher self-esteem and social media popularity (Tazghini, 2013).

## **Health Consequences:**

Clicking numerous selfies may lead to orthopaedics complication such as pain in elbow, now a day's known as "The Selfie Elbow" due to sustained use of arm and hand in obstinate posture.

The American Psychiatric Association (APA) has officially established what many people assumed all along: taking 'selfies' is a mental disorder. The APA made this classification during its annual board of directors meeting in Chicago. The disorder is called selfitis, and is defined as the obsessive compulsive desire to take photos of one's self and post them on social media as a way to make up for the lack of self-esteem and to fill a gap in intimacy( Sharma, 2014).

## **COMPLICATIONS:**

The mental disorder of selfie addiction also results into numerous complications and thus categorized into sub-domains. First of all, patients with selfie addiction have difficulties pertaining to daily life such as poor work performance, unhealthy martial and family relations, peer pressure, inferiority complex and job dissatisfaction etc. Secondly, it also leads to orthopaedic complications such as tennis elbow, cervical spondylitis, chronic fatigue syndrome and frozen shoulder and low back pain etc. The primary reason for these impediments and fatigues is the persistent usage of smart phones or laptops/computers – prolonged typing and clumsy body positions (vats, 2015).

## **Psychological Well-being**

Psychological well being is one of the dimensions of the overall concept of well being, and includes subjective, social dimensions and health related behaviors, that are interrelated but having different meanings, because all of these notions and concepts are centrally working towards one goal and that is; an individual's happiness (Dost, 2005). It is a very subjective term that is used throughout the health industry as kind of a contentment, satisfaction with all elements of life and self-actualisation: a feeling of having achieved something with one's life. According to Diener (1997), psychological well-being refers to how people evaluate their lives and these evaluations may be in the form of cognitions or in the form of affect. The cognitive part is an information based appraisal of one's life that is when a person gives conscious

evaluative judgments about one's satisfaction with life as a whole. The affective part is a hedonic evaluation guided by emotions and feelings such as frequency with which people experience pleasant/unpleasant moods in reaction to their lives. The assumption behind this is that most people evaluate their life as either good or bad, so they are normally able to offer judgments. Further, people invariably experience moods and emotions, which have a positive effect or a negative effect. Thus, people have a level of subjective well-being even if they do not often consciously think about it, and the psychological system offers virtually a constant evaluation of what is happening to the person.

There are certain aspects that are important while studying the psychological well-being of an individual. These aspects must function positively for an individual's better psychological health. A study performed by (Özen, 2005), underlines these significant aspects as positivity in interrelationships, dominance and control over the environment and circumstances, a calm sound mind to accept the present and past, a definite purpose and importance of the life, an ability to promote personal growth, and a mental potency to make firm decisions.

# Six factor Model of Psychological Well-being:

According to Ryff's model the goal of life isn't feeling good, but is instead about living virtuously"(Ryff,1998).Six factors are considered key-elements of psychological well-being:

- 1. Self-acceptance
- 2. Personal growth
- 3. Purpose in life
- 4. Environmental mastery
- 5. Autonomy
- 6. Positive relations with others.

# Relationship between selfie addiction and psychological well-being:

There is a strong direct and indirect relation between selfie addiction and psychological well-being .Although taking selfies is not a mental disorder in itself, yet addiction to it may be an indicator of deeper psychological issues.(Huffington, 2014).

Selfie addiction effects mental health by two aspects which are at first place it increase the risk of addiction potential, cyber bulling and secondly misuse and miss-information that do

not directly effect psychological well-being rather it could be cause of mental health issues. (Soliman et al., 2014).

Link between selfie addiction and psychological well-being is shown in the habit of taking a a lot of selfies which effects individual psychological well-being. It effects individual in form of suicidal attempts and deaths (Bushak, 2015).

People tried to take selfies from the top of towers, bridges, skyscrapers, while skydiving, while jumping off a cliff, and while flying airplanes and in most cases, it resulted in nearly fatal or truly fatal situations ("Seriously Scary and Dangerous Selfies," 2014). Pilot Amritpal Singh, 29, and his passengers were killed in an airplane crash when Singh attempted to take a selfie. He lost control on the airplane and crashed into a wheat field (Hughes, 2014).

Selfie addiction effects the individual's health both mentally and physically. Physical danger leads towards physical disabilities and mental danger leads towards psychological problems like body dysmorphic disorder. (Campbell,2014). Selfie addiction also could lead to anorexia which is an eating disorder and mental health condition (De Choudhury, 2015; Lyons,et al 2006). Anorexia People suffering from anorexia have distorted body image cognition and they feel overweight despite they are actually underweight (Soliman, et al. 2014).

Experts argue that using too much of selfies on social network sites leads to narcissism and others even argued that using the social media in itself constitutes narcissism, lack of selfesteem and the most annoying habit on social media capable of leading to social alienation of one's friends and families (O'shea, 2014; Blaine, 2013). Selfie addiction is also correlated to attention seeking behaviour and excessive attention seeking can affect the psychological well-being of some individuals, and that may cause them to engage in some inappropriate behaviour of taking and posting selfies to attract and obtain positive feedback from their peers. (Angstman & Rasmussen, 2011).

individuals tend to focus mainly on themselves when they take selfies, this tendency might relate to the self-centered behavior that they exhibit, which is one more dimension of psychological well being of an individual. society has recently begun to express concern that taking selfies may be considered a selfish act because it makes people care too much about their appearance in photos and fail to consider other people around them. A study by Fox and Rooney

(2015) supported this argument, showing that people who regularly posted selfies on tended to display lack of empathy.

Chapter II

ISSN: 1673-064X

## Methodology

## **Objectives**

The objectives of the present study are as below:

- 1. To explore the relationship between selfie addiction and psychological well being among university students.
- 2. To find out the difference of Gender, on selfie addiction and psychological well being among university students.

## **Hypotheses**

The hypotheses of the current study are enlisted below:

- 1. Selfie addiction have negative relationship with the psychological well being of university students.
- 2. The level of selfie addiction of female university students is higher than male university students.

## Research Design

The present study was quantitative in nature, which was based on correlation research design.

## **Operational Definition of Variables**

### **Selfie Addiction**

The selfie addiction refers to the number of selfie taken by a person in 24 hours of the day.

## **Psychological Well being**

Psychological Well-being refers to the simple notion of a person's welfare, happiness, advantages, interests, utility, and quality of life (Burris, Brechting, Salsman, & Carlson, 2009). In this study, psychological well-being meant how one scored in the Ruff scale of psychological well-being. The psychological well being is the score one obtained on psychological wellbeing scale.

### Sample

The sample size for current study was 301 university students (male=147, female=154). The sample was taken from four different universities (Abbottabad university, comsats, Hazara university, Haripur university). The sample was divided on the basis of age into two categories(19-23,24-29).

#### **Instruments**

In the present study following two questionnaires had been used to collect the data. The description of two questionnaires is given below:

### Solanki selfie scale

The scale is consisted of 47 items. The internal consistency and concurrent validity of selfie addiction scale were verified (Cronbach's alpha= 0.962).

## Bradburn Psychological well being scale

The scale is made up of two components: the positive affect and the negative affect component. Each component has 5 items. For positive affect, participants receive 1 point for every "Yes" they say. For negative affect, participants receive 1 point for every "Yes" they say. The overall "balance" score is created by subtracting the negative affect score from the positive affect score.

## **Procedure**

The participants of the research study had been approached through personal visit, email and phones. 350 questioners were distributed and 301 were recollected. The response rate was 92%. The respondents of the study were instructed to complete the questionnaire as honestly as possible and make sure to give response on each item of all questionnaires. There was no time pressure for the completion of questionnaires as they were permitted to complete these questionnaires on their easiness. After the collection of the required data it was fed into SPSS for further analyses.

## **Analyses and Interpretation**

The next step after data collection was the statistical analyses of the data in order to examine the hypotheses and objectives of the study. For this purpose the data were analyzed through different analyses (item total correction analysis, reliability analysis, t-test). These analyses were made by using SPSS package.

**Chapter III** 

#### Results

After completion of the data collection, the 301 selected cases were entered into Statistical Package for Social Sciences (SPSS 21.0 for Windows) computer program for quantitative analyses. Keeping in view the objectives of the study, that is to investigate the relationship of selfie addiction and psychological well being of university students; help was taken from different statistical analyses to achieve a number of results. In addition the present study was aimed to address the effects of gender with selfie addiction and psychological well being scale. Reliabilities of all the study variables were assessed. Secondly descriptive of all variables (means, standard deviation, skewness, upper and lower limit) were estimated. Bivariate correlation was used to assess the relationship between selfie addiction and psychological well being of university students. T-test was used to find out gender related differences.

To see the psychometric properties and descriptive statistics of Test of Selfie- addiction and Psychological Well being scales among university students, the Cronbach's Alpha reliabilities, Mean, Standard Deviation, Range and Skewness were computed.

**Table 1** Psychometric Properties of the Major Study Variables (<math>N = 301).

Variable	No. of Items	Cronbach α	Mean	SD	Skew
Selfie Addiction	47	.98	148.11	52.29	.43
Psychological well being	10	.42	5.8	9.92	.00

Table 1 illustrates the psychometric properties and descriptive statistics for Test of Selfie addiction and Psychological well being scale. Means and standard deviation were computed to show the average scores of participants on all study scales. Mean for Selfie Addiction Scale is

148.11 and standard deviation is 52.29.Mean of Psychological Wellbeing Scale is .42 and standard deviation is 9.92. Value of skewness indicates distribution of scores among variables. Positive value of skewness on both scales indicates that the distribution curve is light tailed and pointed. Absolute value for skewness less than 2 (-1 to +1) can be used as normal distribution of data and parametric testing can be assessed. Therefore, judgment was taken to go on for further analysis with normality achieved.

The frequency and percentage of the males and females are 147,48.8% and 157,51.2% respectively.

Summary of Inter correlations, Means, and Standard Deviations for Scores of the Variables (N = 301).

Serial No	1	2
Selfie addiction	-	299**
Psychological wellbeing		

Table 2 shows the superficial insight about the relationship of study variables and the Selfie Addiction is strongly negatively correlated with psychological well being, that is (r=-.299,p<.05).

To find out the gender differences among university students for the relationship between age, qualification, institutes, marital status and family system, mean differences were computed using independent sample t test. Gender is categorical variable and there are two distinct categories of it i.e. males and females. The result of analyses is as follows.

**Table 3**Contrast of Male with Female for the Demographic and Study Variables (N = 301).

Variables		Male n=147		Female $n=154$		95% CI			Cohen's
	M	SD	M	SD	t	p	LL	UL	d
Selfie addiction	146.16	45.32	149.97	58.24	63	.00	-15.6	8.06	.07

Table 2

Pwb 6.01 1.74 5.71 2.06 .46 .01 -.33 .536 .05

Note. Pwb=Psychological well being

Table 3 illustrates Independent sample t-test for gender on demographic variables and study variables. Females Selfie addiction is significantly higher in females(M=149.97,SD=58.24,P=.00). Males showed higher at psychological well being (M=5.81,SD=1.71,P=.01). Cohen's *d* was also calculated which indicates effect size among male and female. Cohen's *d* of all the variables shows the small effect size.

**Chapter IV** 

ISSN: 1673-064X

## **Discussion**

The present study was aimed to explore the relationship between the selfie addiction and psychological well being of university students. The research aimed to get indepth knowledge about selfie addiction and psychological well being in relation to gender. Solanki selfie addiction and Bradburn psychological well being scale are used to collect the data. Initially psychometric properties of the scales were determined.

Main study was carried out on the sample of 301 married couples. Analysis was performed through SPSS-21. Alpha coefficient of all the scales were computed (.77 for selfie addiction scale and .82 for Bradburn psychological well being scale) which show that there is consistency in the scores of the sample. Number of items, mean, standard deviation, score range as potential and actual ranges and skewness of the sub scales were computed. Findings revealed that the value of skewness is within acceptable range, which indicates that scores are normally distributed.

According to the results there is a negative relationship between selfie addiction and psychological well being, as per hypothesized. Selfie addiction is proved to be negatively correlated to psychological well being (-.299\*\*). These findings suggested that individuals who reported higher degree of selfies liking tended to reveal the characteristics that are associated with low level of psychological well being to a greater extent than those who reported lower degree of selfies liking. More specifically, these results were consistent with previous research, which found that narcissistic individuals who liked to create self-impressions tended to be more prone to engaging in unhealthy behaviours that allowed them to fulfil this desire (Bleske-Rechek et al., 2008; DeWall et al., 2011). The trend of uploading selfies appears to be a growing form of

self-presentation and self-promotion in social networking sites such as facebook, twitter instagram etc. The selfie addiction leads to many of the psychological problems that are directly or indirectly linked to psychological well being of the selfie addictor, psychological well being comes from life span developmental perspectives, which emphasizes the differing challenges confronted at various phases of life cycle .psychological well being encompasses various domains including self acceptance, positive relationship with others, personal growth, optimism, purpose in life, self actualization and autonomy. People who are addicted to selfies develop many of the characteristics that are threat to their psychological well being. At very first hand selfie addictors develop narcissistic qualities where they obsessively spend all of their free time either taking photos of them or editing them to make themselves look perfect. There are many photo editing programs where one can hide any facial imperfections and fix angles, filtering and illumination to give people idealistic expectations that this is what you look like. Narcissism has been found to be linked with both the production and the perception of selfies. Narcissism has been found to be strongly related to selfie-related activities (Fox and Rooney, 2015; Sorokowski et al., 2015; Weiser, 2015), to picture-related activities (Kapidzic, 2013), and to Facebook usage in general (Mehdizadeh, 2010).

Individuals who become obsessed with taking selfies tend to feel that their personal lives and psychological well-being are deteriorated, but they may feel that quality of relationship with others are also impaired. Some experts have argued that selfie-taking behavior can be linked to mental illness, however, psychologists suggest that it is not an addiction but a symptom of body dysmorphic disorder, which occurs when an individual constantly checks his or her appearance and tries to take perfect photos to impress others (Fox & Rooney, 2015; Sorokowski et al., 2015; Weiser, 2015). It have been stipulated that seven personality factors which are Obsession, Narcissism, Social Support, Self-Image, Need for affiliation, Hyperactivity, Impulsivity, and Perfection. According to Martino( 2014) those who post selfies are narcissistic to achieve 'the perfect selfie' and repeated attempts can lead to obsession and compulsion, meanwhile, the absence of feedback, specially positive feedback, on a selfie can be potentially dangerous for one's self image and self-esteem. According to Haggard (2014), people believe self-imaging as a way to validate and express themselves. However, other researchers are proposing that being highly involved in the trend can be related to low self-esteem or narcissism (Haggard, 2014).

First results on selfies also suggest that gender is an important variable which might need to be considered when trying to explain the perception and evaluation of selfies. In this respect, several studies indicate a behavioral difference between males and females in taking and sharing selfies, with females being found to be much more active than males(Sorokowski et al., 2015, 2016;Sorokowska et al., 2016).

The findings of table 4 supports the fact that females are at higher level of selfie addiction then males (M=149.97,SD=58.24).

Earlier researches have shown that there might be a gender difference in social media usage, particularly regarding self-presentation. It has been found that males tend to use social media mostly for information purposes, whereas female users place greater value on a diverse self-presentation. These findings are supported by studies indicating that female Face book users are more active and put greater effort into impression management through their selfies(McAndrew and Jeong, 2012). Studies investigating selfie addiction suggest that, females post twice as many selfies as males (Sorokowski etal.,20152016;Sorokowska et al., 2016).

## Conclusion

Present study set to explore the relationship between selfie addiction and psychological well being of university students. The findings are related to the previous literature to some extent. The current study expands the knowledge of a current popular area in examining selfie related behaviour and its features, and also provides a foundation for further research in this area. This study also adds to a vast amount of research that has previously done on selfies and self esteem, narcissism, body image and problematic internet usage. The study empirically proved the negative correlation between selfie addiction and psychological well being of university students and that females are more addicted to selfie addiction than males.

## **Limitations and Suggestions**

The present study has some of the following limitations.

While the findings in this study deliver a jumping off point into the introduction of selfies and psychological well being, it does so at a superficial level. There is still much more to learn about this phenomenon and its implication on the individual's psychological state. Future research should focus on males and females of other age brackets, in order to fully understand the impact of selfies and its influence on psychological well being, emotional state and motivations.

Selfie addiction and psychological well being were assessed only with the self-repot measures which might hinder in exploring other confounding factors that contribute in their relationship. So in future this should be considered in order to have genuine findings.

Present study is a cross-sectional design. In future longitudinal study can be conducted with these variables. Selfie addiction and psychological well being are complex phenomenon that are influenced by multiple factors, so these variables cannot be assessed easily in cross-sectional research design.

Findings of the present research cannot be generalized to whole population as the sample is small and is collected by the participants who volunteered with a consent of participation, from the premises of Abbottabad, Haripur and Mansehra. In future more diverse sample with random sampling technique can lead to different and more generalized findings.

## **Implications**

The results of this study make a suitable addition to the body of research directed at people's behavior on popular social networking sites, especially for the field of social work. One of the strengths of this research lies in the design, where the participant's social context was incorporated to the analyses. This study provides a framework for future explorations for clinicians in the field of social work relating to identity construction through self-presentation and social media use in a rapidly changing, communication environment. It is important to continue research in the area of selfies as a category on its own due to the endless ways it is incorporated in our lives.

Future research should consider going beyond one college into further college populations or populations outside colleges and universities to get a more diversity and a conclusive result. Future research should also consider obtaining a much larger sample size as it would be more beneficial and would obtain a more true result.

## References

Angstman, K. B., & Rasmussen, N. H. (2011). Personality disorders: Review and clinical application in daily practice. *American Family Physician*, 8, 1253–1260.

Blaine, L. (2013, August 14). How selfies are ruining your relationships. Time. Retrieved from http://newsfeed.time.com/2013/08/14/how-selfies-are-ruining-your-

relationship s/

- ISSN: 1673-064X
- Bleske-Rechek, A., Remiker, M. W., & Baker, J. P. (2008). Narcissistic men and women think they are so hot But they are not. *Personality and Individual Differences*, 45, 420–424. http://dx.doi.org/10.1016/j.paid.2008.05.018
- Bradburn N.M.(1969). The structure of psychological well-being. Chicago: Aldine.
- Buffardi, L. E., & Campbell, W. (2008). Narcissism and social networking web sites. Personality and Social Psychology Bulletin, 34, 1303-1314. doi:10.1177/0146167208320061
- Bushak, L. (2015, August 18). Selfies can reveal personality traits: What your duck face says about you. *Medical Daily*.
  - Retrieved from http://www.medicaldaily.com/selfies-can-reveal-personality-traits-what-your-duckface-says-about-you-348296
- Coopersmith, S. (1967). The antecedents of selfesteem. San Francisco, CA: Freeman.
- Diener, E. (1996). Traits can be powerful, but are not enough: Lessons from subjective well-being. *Journal of Research in Personality*, 30, 389–399
- Dost, M. T. (2005). ÖznellyiOlusÖlçegi'ninGelistirilmesi: GeçerlikveGüvenirlikÇalısması. TürkPsikolojikDanısmaveRehberlikDernegi, 3,(23), 103-111.
- De Choudhury, M. (2015). Anorexia on Tumblr: A characterisation study. In Proceedings of the 5thInternational Conference on Digital Health 2015, (*pp.43-50*).
  - Retrieved from http://dl.acm.org/citation.cfm?id=2750515
- DeWall, C. N., Buffardi, L. E., Bonser, I., & Campbell, W. K. (2011). Narcissism and implicit attention seeking: Evidence from linguistic analyses of social networking and online presentation. *Personality and Individual Differences*, *51*, *57–62*.
  - http://dx.doi.org/10.1016/j.paid.2011.03.011
- Fox, J., & Rooney, M. C. (2015). The Dark Triad and trait self-objectification as predictors of men's use and self-presentation behaviours on social networking sites. *Personality and Individual Differences*, 76, 161-165.
  - http://dx.doi.org/10.1016/j.paid.2014.12.017
- Kapidzic, S. (2013). Narcissism as a predictor of motivations behind Facebook profile picture selection. *Cyberpsychol. Behav. Soc. Netw. 16, 14–19.* doi:10.1089/cyber.2012.0143
- Katz, E. Gurevitch, M. & Haas, H. (1973). On the use of the mass media for important things. *American Sociological Review*, 38, 164-81.
- Martino, J. (2014, April 7). Scientists link selfies to narcissism, addiction, and mental illness. Collective Evolution. Retrieved from http://www.collectiveevolution.com/2014/04/07/scientistslink- selfies-to-narcissism-addiction-mental-illness/

- McAndrew, F. T., and Jeong, H. S. (2012). Who does what on Facebook? Age, sex, and relationship status as predictors of Facebook use. Comput. Hum.Behav. 28, 2359–2365. doi: 10.1016/j.chb.2012.07.007
- Mehdizadeh, S. (2010). Self-presentation 2.0: Narcissism and self-esteem on Facebook. *Cyberpsychology, Behavior, and Social Networking, 13, 357-364*.
- O'shea, C. (2014). Science confirms that selfies are the worst.

  Retrieved from <a href="http://daily lounge.com/the-daily/entry/science-confirms-that-the-selfies-are-the-worst">http://daily lounge.com/the-daily/entry/science-confirms-that-the-selfies-are-the-worst</a>
- Ozen, O. A., Akpolat, N., Songur, A., Kus, I., Zararsiz, I., Ozacmak, V. H. and Sarsilmaz, M. (2005) Effect of formaldehyde inhalation on Hsp70 in seminiferous tubules of rat testes: An immunohistochemical study. Toxicol Ind Health 21:249–254.
- Pearlman, J. S. (2013, November 19). Australian man 'invented the selfie after drunken night out.' *The Telegraph*.

  Retrieved from
  - http://www.telegraph.co.uk/news/worldnews/australiaandthepacific/australia/1045911 5/Australian-man-invented-the-selfie-after-drunken-night-out.html
- Haggard.Persistent body image disturbance following recovery from eating disorders International Journal of Eating Disorders .Volume 47, Issue 4
- Hughes, T. 2015, February 4. NTSB: Selfies led to fatal colo.plane crash. USA Today.
- Retrieved from http://www.usatoday.com/story/news/nation/2015/02/03/ntsb-selfies-disoriented-pilot-causing-crash/22785475/
- Ryff, C. D. ve Singer, B. (1998). The contours of positive human health. *Psychological Inquiry*, 9,1-28.8
- Sharma, P., Shah, N., Bharati, A., Sonavane, S., & Desousa, A. (2014). Attitude toward Selfie Taking and its Relation to Body Image and Narcissism in Medical Students. Indian *Journal of Psychological Medicine*, 40(1), 17–21. http://doi.org/10.4103/IJPSYM.IJPSYM\_169\_17
- Soliman, M., Girgis, J. & Morgan, C. (2014). Social media and health.Published research paper.Medlink Conference, December 2013, Nottingham: Nottingham University
- Sorokowski, P., Sorokowska, A., Oleszkiewicz, A., Frackowiak, T., Huk, A., & Pisanski, K. (2015). Selfie posting behaviors are associated with narcissism among men. *Personality and Individual Differences*, 85, 123–127.
  - http://dx.doi.org/10.1016/j.paid.2015.05.004
- Sorokowski, P., Sorokowska, A., Frackowiak, T., Karwowski, M., Rusicka, I., and Oleszkiewicz, A. (2016). Sex differences in online selfie posting behaviours predict histrionic personality scores among men but not women. *Comput. Hum. Behav.* 59, 368–373.
  - doi:10.1016/j.chb.2016.02.033.

Twenge, J. M., & Foster, J. D. (2010). Birth cohort increases in narcissistic personality traits among American college students, 1982-2009. *Social Psychology and Personality Science*, 1(1), 99-106.

doi; 10.1177/1948550609355719

- Vats, M., Selfie syndrome: An Infectious Gift of IT to Health Care, Journal of Lung Pulmonary & Respiratory Research 2015; 2,4: 00048.
- Weiser, E. B. (2015). #Me: Narcissism and its facets as predictors of selfie-posting frequency. *Personality and Individual Differences*, 86, 477–481 http://dx.doi.org/10.1016/j.paid.2015.07.007
- Wade, N. J. (2014). The first scientific 'selfie'? Perception, 43, 1141-1144.