

Construction and characteristic of the *media exhibitionism* construct and the Media Exhibitionism Questionnaire

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Abstract

Introduction: Internet users often reveal online intimate details from their lives, such as pictures with naked parts of their bodies or posts about their emotional states. The first part of the article presents an attempt to create media exhibitionism construct based on psychopathological criteria from ICD-10. The second part of the article presents psychometric properties of the Media Exhibitionism Questionnaire.

Material and methods: After extracting 49 items, based on the theoretical foundations of the media exhibitionism construct, the competent judges assessed the accuracy of individual items. This resulted in the selection of 20 statements. Then the revised questionnaire was sent to Facebook users asking them to fill it out and send it to other users of the portal. The exploratory factor analysis (EFA) was carried out by the method of main components with Varimax rotation on N=65 persons, and confirmatory factor analysis (CFA) was conducted on N=554 persons.

Results: After EFA the questionnaire consisted of 14 items and 4 factors: physical exhibitionism, exhibitionism of narcissistic traits, emotional exhibitionism, exhibitionism of histrionic traits. The four-factor solution was adopted on the basis of theoretical assumptions. The chi2 value was significant ($\chi^2=286.01$; $p<0.001$), which indicated discrepancies between the observed covariance matrix and the one implied by the model. Other indicators have shown a satisfactory agreement between the data and the model.

Conclusions: The questionnaire has satisfactory psychometric properties ($\alpha=0.846$) and can be used to predict problem behaviours on social media, as well as in counselling regarding responsible development of self-image on the Internet.

Keywords: Internet, exhibitionism, social media, Questionnaire Design, Media Exhibitionism Questionnaire (MEQ)

Streszczenie

Wstęp: Internauci często ujawniają w sieci intymne szczegóły ze swojego życia, takie jak zdjęcia z nagimi częściami ich ciała lub posty o swoich stanach emocjonalnych. W pierwszej części artykułu przedstawiono próbę stworzenia konstrukt ekshibicjonizmu medialnego opartego na kryteriach psychopatologicznych z ICD-10, gdzie ekshibicjonizm, narcyzm i histrioniczne zaburzenie osobowości są rozumiane jako niekliniczne przejawy zmiany osobowości wynikającej z funkcjonowania głównie w mediach społecznościowych. W drugiej części artykułu przedstawiono budowę i właściwości psychometryczne Kwestionariusza Ekshibicjonizmu Medialnego.

Materiał i metody: Po wyodrębnieniu 49 pozycji, które oparto na teoretycznych podstawach konstrukt ekshibicjonizmu medialnego, sędziowie kompetentni ocenili trafność poszczególnych pozycji. Zaowocowało to wyselekcjonowaniem 20 stwierdzeń z najwyższą punktacją. Pilotażowe badanie polskich użytkowników Facebooka przyniosło kilka zmian dotyczących formy wyrażenia użytych w kwestionariuszu. Następnie poprawioną ankietę rozesłano do kilkunastu użytkowników Facebooka z prośbą o jej wypełnienie i przesłanie do innych użytkowników portalu. Eksploracyjną analizę czynnikową (EFA) przeprowadzono metodą składowych głównych z rotacją Varimax na N=65 osobach, a confirmacyjną analizę czynnikową (CFA) na N=554 osobach.

Wyniki: Po eksploracyjnej analizie czynnikowej kwestionariusz składał się z 14 pozycji i 4 czynników: ekshibicjonizm fizyczny, ekshibicjonizm o rysie narcystycznym, ekshibicjonizm emocjonalny; ekshibicjonizm o rysie histrionicznym. Na podstawie założeń teoretycznych przyjęto rozwiązanie czteroczynnikowe. Wartość chi2 była istotna ($\chi^2=286,01$; $p<0,001$), co wskazywało na rozbieżności między obserwowaną macierzą kowariancji a tą implikowaną przez model. Pozostałe wskaźniki wykazały zadowalającą zgodność danych z modelem (RMSEA=0,074; GFI=0,929; AGFI=0,894; CFI=0,925; SRMR=0,066).

Wnioski: Kwestionariusz ma zadowalające właściwości psychometryczne ($\alpha=0,846$) i może być wykorzystywany do przewidywania zachowań problemowych w mediach społecznościowych, a także w poradnictwie dotyczącym odpowiedzialnego kształtowania własnego wizerunku w Internecie.

Słowa kluczowe: Internet, ekshibicjonizm, social media, projektowanie kwestionariusza, Kwestionariusz Ekshibicjonizmu Medialnego (KEM)

Introduction

The Internet is a specific area of human functioning that enjoys more and more interest among researchers of various scientific disciplines. Particularly interesting in this aspect are studies on the behavior of Web users who function in it as active content creators and publish information about their personal and professional life, about their passions, problems or dilemmas. Especially, social media offer great opportunities for people to show many aspects of their own and someone else's life. Social media (SM) are "web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system" [1].

There are many studies showing why people are using social media. For example for entertainment, chatting, surfing the net and social networking [2, 3, 4], integration and social interaction [5], personal identity [6, 7], information [8, 9], communication tool with family [10] and social support [11]. A. Whiting and D. Williams identified a total of ten reasons for using social media. To the mentioned above: entertainment, social interaction, information (in their article: information seeking and information sharing) and communication function (in their article: communicatory utility) they added: passing time, relaxation, convenience utility, expression of opinion, and surveillance or knowledge about others [12].

Some researchers argue that following users on social media without interacting, e.g. to maintain relationships, becomes a kind of social surveillance or voyeurism [13, 14, 15]. Other negative aspects of using social media include for example psychological and emotional problems [16, 17, 18], work problems [19], personal and family conflicts [20], privacy problems [21], cyberbullying [22, 23], body image disorders [24] and risky sexual behaviour [25, 26].

Being in the social media promotes changes in people's behavior, which sometimes become more expressive and intense than in offline life. Internet users often reveal online intimate details from their lives, such as pictures with naked parts of their bodies or posts about their emotional states. Such behaviour can be considered media exhibitionism, which involves the publication of

one's feelings, emotions, experiences, photos, videos and coverage on the Internet, which are full of very personal, sometimes intimate, details. It should be noted that the respondents who participated in the testing of the Media Exhibitionism Questionnaire, about which more in the following parts of the article, were users of portal Facebook, the most popular social network in the world and in Poland now [27, 28]. Therefore, it is worth indicating at this point what opportunities that portal offers in terms of sharing the details of the life of its users.

That portal has the most functions and features that allow to publish content in various formats: photos, videos, livestreamings, posts, comments. Its users can also, for example, participate in setting up and moderating thematic groups, watch party, run their own business, date [e.g. 29], use it for research [30] and many others. For many users this portal has become a means of expression and a way of commemorating every detail of their lives, such as giving birth or breaking a long-standing relationship.

Psychologists note with concern that Facebook has made many people's self-esteem defined by the number of likes, relationship status or retouched photos. Furthermore, it can lead to relationship issues caused by jealousy or behaviour resulting from an excessive need for attention [31]. The number of studies on Facebook users is growing, but relatively little is known about how its use influences personality changes and user behavior in a clinical and psychopathological context. Externalizing problems, describing in detail diseases, experiences, intimate experiences, publishing undressed photos are risky behaviors that can cause many problems for Facebook users. First, there may be network security issues due to the lack of protection of the content on account from a wider audience (e.g. setting profile to public instead of private) [see. e.g. 32]. Secondly, dazzling with nude photos and information about the details of illnesses and problems may contribute to hating someone, making fun of them and pushing to the margins of a group, e.g. a peer group. Third, the behavior related to the use of social media may resemble the symptoms of mental disorders and diseases. Some professionals refer to this as iDisorders, which stands for symptoms of mental disorders such as OCD, narcissism and addiction,

or even ADHD, which are manifested by the use or abuse of technology. In this case, the subject worth exploring is whether the use of technology exacerbates these symptoms or makes them exhibit at all [33].

It follows from the above that this issue is worth attention, which is why the article attempts to define what media exhibitionism is and what forms it can take. Then it guides through the process of constructing the Media Exhibitionism Questionnaire on the trials of Polish Facebook users¹. This is important because there is a lack of a tool to measure the broad spectrum of exhibitionist behavior in the media. Previous studies, available in Polish and English-language literature on the subject, focused on some selected elements of exhibitionist behavior of social media users, for example in the context of publishing selfies [34] or using selected items of tools measuring narcissistic behavior in SM [35]. However, social media developed in its functionality, such as the aforementioned Facebook, generate much more various exhibitionistic behaviors that are difficult to study using the existing tools. Therefore, a new tool is needed, the foundations of which will be described in the following parts of this text.

Media exhibitionism

The attempt to create a construct for media exhibitionism emerged from the observations of social media (especially Facebook) users' behaviour, reading scientific and popular literature on the subject, conversations with students of psychology and students of media studies, and discussions with psychologists, psychiatrists, media specialists and Facebook users.

There are several terms in the scientific literature that characterize exhibitionist behavior on the Internet.

The term *digital exhibitionism* has been used, for example, in the expression *era of digital exhibitionism* as a description of the behavior of today's Internet users, who express themselves mainly by posting photos of themselves or their selfies on social networks [36], so this concept is associated with publishing materials on which the silhouette or its part is visible, but not necessarily completely exposed.

Analyzing further, the concept of *electronic exhibitionism* was used, for example, in an article on the consequences of exhibitionism and electronic voyeurism in the workplace. "Electronic exhibitionism describes the increasing worldwide phenomenon of individuals eviscerating their own privacy by affirmatively or inadvertently posting and distributing private and intimate information, thoughts, activities and photographs via email, text messaging, blogs, and social networking

pages" [37]. Electronic exhibitionism is understood here as the electronic dissemination of personal thoughts, opinions and activities among potential recipients around the world, with a subjective sense of privacy.

The concept of *social exhibitionism* is similarly understood, but has not been clearly defined. In some studies it is treated more broadly and is associated with the lack of awareness about the dangers of posting various personal materials on the Internet without reflection, especially by young people. The following was considered as a manifestation of social exhibitionism on the Internet: "uploading photos and videos, sharing private information about oneself and informing about current activity" [38].

There is also a term *photographic exhibitionism*, used by Flora Oswald and colleagues to describe the sharing of images of genitals by men that are unwanted by the recipients - colloquially known as "dick pics" [39]. It is more akin to sexting (a form of electronic communication in which the message is sexually suggestive content, image, video or live link) than media exhibitionism. Related to that concept is also the concept of *mediated exhibitionism*, which is understood as "the phenomenon of amateur performers exposing their nude bodies on the Internet, and includes the exchange of nude images by email, text message, webcam, electronic bulletin board, and other means of digital communication" [40].

In the literature on the subject, a definition of *media exhibitionism* can be also found, the author of which is Agnieszka Ogonowska, a researcher at the Pedagogical University of Krakow. According to her, media exhibitionism is "Exposing own privacy (real or fake) for show using the media with the intention of arousing the interest of viewers and users of information and communication technologies and the desire to meet economic, social and psychological needs" [41]. Due to the subject and purpose, she distinguished the following types of media exhibitionism: a. pornographic exhibitionism - nudity and sexually motivated behavior that evoke sexual arousal and motivate to sexual activity; b. body exhibitionism - exposing the human body in relation to biological processes (e.g. maturing, dying), socialization (e.g. dressing, gymnastics) and advertising, persuasive messages, etc.; c. autobiographical exhibitionism - messages about private life, also saturated intimate outbursts, created mainly for therapeutic and documentary purposes; d. self-promotional/economic exhibitionism - messages serving the self-presentation of a person or activity for economic purposes [42].

The last term that appeared while searching materials from scientific sources was the concept of

1. The article was inspired by theoretical considerations and research on media exhibitionism of Polish Facebook users, which the author presented in an unpublished thesis entitled "Personality traits of Internet exhibitionists and their self-esteem and ways of coping with stress", defended in 2019 at the SWPS University of Humanities and Social Sciences. These considerations have been expanded, supplemented and redrafted.

emotional exhibitionism, which is characterized by the fact that it has a greater level of intimacy, expression of emotions and personal opinions on various topics on social media [43].

Researchers claim that social media exhibitionism is publishing personal information in order to be admired [44]. Exhibitionism appears in scientific research mainly as a predictor of behaviour in social media. For example, P. Sorokowski and colleagues checked the differences between men and women in selfie posting behavior. It turned out that women posted more selfies than men. In addition, the level of extroversion in the subjects of both sexes made it possible to predict the number of selfies published by them [45]. A well-tested Self-Disclosure Scale is a tool for measuring exhibitionism in social media in the context of posting selfies [46]. It contains the following items: 1. Posting selfie for attention by the people. 2. Because my posted selfie makes me cool among my peers. 3. Posting selfie to gain fame or notoriety. 4. Because I like when people see my selfie [47]. Another way to measure exhibitionist behavior in SM is to use the exhibitionism subscale in narcissism measuring tools, for example the NPI-16 [48]. The items in this subscale are: 1. I really like to be the center of attention on Facebook. 2. I am apt to show off on Facebook if I get the chance. 3. I get upset when people don't comment/put a like on my posts on Facebook. They were used, for example, in the study of positive (social enhancement and interpersonal connectivity) and negative (exhibitionism, voyeurism) gratifications in the use of Facebook. In this study results show that exhibitionism, voyeurism and interpersonal connectivity are predictors of use of that portal. It turned out that number of friends on Facebook reduces the effect of exhibitionism, but generates the effect of social enhancement. The researchers also emphasized the essence of researching the influence of exhibitionism and voyeurism as a socio-psychologically dark side of SM on the functioning of their users [49].

Taking into account the results of searches and the content of the referenced studies and others that describe the studied phenomenon, it can be assumed that **media exhibitionism** is publishing information about personal, often intimate (physical and emotional) experiences on the Web (e.g. on blogs, personal websites or social media accounts). It is sharing detailed information about private or professional situations in front of a wider audience (e.g. a group of friends or random Internet users) in the form of descriptions, posts, but also photos, videos and live streamings. Such behavior may be dictated by very different - conscious or unconscious - motivations, e.g. the desire to achieve better well-being, the desire to raise self-esteem, the desire to feel relief after telling / writing about personal case, the desire to gain attention from other

Internet users or to gain fame. The multiplicity of these motivations provoked discussions in a wider group and attempts to distinguish the types of media exhibitionists. In the course of conversations and discussions with students and specialists in the field of media and psychology, it turned out that the media exhibitionist can publish, for example, mainly photos showing his/her body, often half-naked, in a bathing suit or from a boudoir or fashion session. In extreme situations, he/she may publish his/her naked photos, but it is not possible on every website on the Internet - for example, Facebook's regulations prohibit it. These behaviors include exhibitionism in the field of publishing exposed parts of body, but also, as the above analysis of scientific materials has shown, emotional exhibitionism. Further observations of Facebook users' behavior showed that this division is not enough. There are also exhibitionist narcissistic behaviors, which were described during research on narcissistic behaviors in the social media [50]. After all, there are also behaviors that resemble the behavior of people suffering from histrionic personality disorder [51], and which psychology students and psychologists indicated during the discussion as different from the other three forms. They described such behavior as theatrical, even reminiscent of making a show around oneself, and at the same time saturated with excessive yielding to opinions and evaluation of other Internet users, full of self-dramatization and inappropriate seductiveness in appearance and behavior. Therefore, it was assumed that the **media exhibitionism referred to in this article will have four subtypes: physical** (publishing exposed parts of body), **emotional, narcissistic and histrionic**. Such a division justified the adoption of psychopathological criteria in designing the construct of media exhibitionism and a tool for its measurement, which will be discussed in the next parts of this text.

Psychopathological criteria of media exhibitionism construct

An attempt to create a structure for media exhibitionism is based on psychopathological criteria [52, 53]. Exhibitionism, narcissism and HPD are herein considered non-clinical symptoms of personality variability caused by functioning on the Internet, mainly in social media. Theodore Millon [54, 55] described prototype models of psychosocial functioning of people. In his view, the healthy display a style of personality, people with some difficulties - a type of personality, and the ill - personality disorders. In the case of a non-psychopathological model of media exhibitionism, the style or type of personality will display characteristics of personality disorders adapted to the realities of functioning, for example, in social media. It should be

noted, however, that this is the first experimental approach to the creation of this kind of construct, which is intended to study the tendencies of exhibitionistic media users within non-clinical and non-criminal groups. However, it is possible that functioning in a mediated environment may affect the development of the personality of media exhibitionist also within such groups and co-exist with other disorders.

It is worth mentioning here that so far, there have been successful attempts to create subclinical constructs based on the clinical picture of narcissism [e.g. 56, 57], psychopathy [58], as well as mixed constructs such as the Dark Triad [59], or its extended version in the form of a Dark Tetrad in which, in addition to subclinical narcissism, subclinical psychopathy and Machiavellianism, a tendency to sadism was added [60]. For example, Robert N. Raskin and Calvin S. Hall developed the Narcissistic Personality Questionnaire, NPI [61, 62]. From 220 initial items, the tool has evolved to 54 and had a high reliability index (α : 0.80 and 0.86). The items in the questionnaire were based on narcissistic criteria, separated from DSM-III and included: a grandiose sense of self-importance and uniqueness; a preoccupation with fantasies of unlimited success, power, beauty and ideal love; exhibitionism (expecting constant attention and admiration); demanding attitude (expectation of special favours without reciprocation); interpersonal exploitiveness.

Exhibitionism and emotional exhibitionism

The analysis of the phenomenon of media exhibitionism can be started by referring to exhibitionism as one of the forms of paraphilia, that is, disorders of sexual preference, which are characterised by specific fantasies and sexual behaviours. According to the Polish version of The International Statistical Classification of Diseases and Related Health Problems ICD-10 [63, 64], exhibitionism (F65.2) is either a recurrent or a persistent tendency to expose one's genitalia to unsuspecting strangers, usually of the opposite sex. The exhibitionist does not seek sexual intercourse but is satisfied mainly with the sight of surprised, frightened, curious or angry people. The vast majority of exhibitionists are men, while women fulfil the urge to be watched through socially acceptable activities, such as participation in fashion shows, advertisements or beauty contests [65]. Exhibitionists are usually harmless, rather shy and sexually hyperactive. They experience difficulties in establishing and maintaining relationships with others; they idealise women and often fantasise about masochistic and fetishist satisfaction [66, 67].

Exhibitionistic disorder regarding the ability to maintain an affective-erotic relationship between people may accompany an individual throughout their whole sexual activity period or only during rough moments in

life, for example, due to personal or professional problems. Exhibitionists are usually not harmful; they approach the potential victim at a distance of 1.5 to 15 metres, most often in parks, in the vicinity of girls' schools, churches, or in crowded spaces. The most disturbing situations include exhibitionist walking with a whistle, wearing just a raincoat and whistling to attract attention. When a woman reacts, the exhibitionist demonstrates his genitals, hits a shop window with his erected penis or sits close to his victim and starts masturbating [68].

Emotional exhibitionism, which is understood as a defence mechanism against problems, upsetting feelings or remembering painful experiences, and avoiding to understand them; is considered to be a specific type of the discussed disorder [69]. This kind of exhibitionism leads to burdening other people with one's own personal problems, even though the solution lies solely with the individual. This is how emotional exhibitionists attempt to restore their self-esteem [70]. It is similar to a projection which is considered to be a narcissistic defence mechanism and activated in order to avoid frustration and confrontation with one's own unpleasant experiences [71]. Ergo, the set of media exhibitionists' distinguishing features also includes some of those attributed to the narcissistic personality.

Narcissism

The first psychological theory of narcissism, as a developmental and not merely a psychopathological tendency, was created by the father of classical psychoanalysis, Sigmund Freud. This concept was also developed by his students. The common denominator of the different concepts of narcissism in a psychoanalytical approach [72] is a tendency for excessive self-centredness.

According to psychoanalytical concept by Otto F. Kernberg [73, 74], apart from pathological narcissism, there exists a type of healthy adult narcissism and healthy infantile narcissism. The latter is characterised by regression or fixation with exhibitionist tendencies, demands and striving for power in order to satisfy infantile needs. A combination of such behaviours may resemble those of media exhibitionist who, through the publication of provocative photographs and emotional posts, wishes to attract the attention of the public and thus satisfy their own needs

The narcissistic personality disorder is diagnosed in ICD-10 when there occur general personality disorder criteria (F60.-) and at least five of the following traits/behaviours [75]: a grandiose sense of self-importance (e.g. exaggeration about one's achievements); being absorbed by delusions of their own power; a conviction of being unique, who can only be understood by someone as special; needs of exaggerated admiration; a sense of being privileged and

unjustified expectation of special treatment or immediate acceptance of their expectations; exploiting others for their own purposes; lack of empathy and reluctance to consider other people's needs; enviousness and a belief that others are envious; and arrogant behaviours and attitudes². Media exhibitionists may desire to be admired, focus greater attention on themselves than others, concentrate on their own affairs online. They will do so in order to feel pleasure and reinforce their self-esteem.

Histrionic personality disorder

In psychopathology, one more disease entity is discussed, whose symptoms can be observed in media exhibitionists. It is a histrionic personality disorder (F60.4) included in *The International Statistical Classification of Diseases and Related Health Problems* within Specific personality disorders. In accordance with the ICD-10 [76], histrionic personality (F60.4) is considered a personality and behavioural disorder. A diagnosis indicating this disorder may be based on the observation of at least four of the following criteria: a superficial and unstable emotionality; tendency to dramatise; excessive emotional expression; suggestiveness; self-centredness; permissiveness towards one's own behaviours and actions; disregard for the needs of other (also close) people; exaggerated resentment; desire to be admired, praised; and a need for excitement. Other diagnostic criteria include: inauthenticity of feelings expressed; frequent and unexpected changes in mood; wishful thinking; easy succumbing to the influence of other people or circumstances; dependency on the environment; exuberant imagination; daydreaming; intolerance to criticism and frustration; demanding attitude; tendency to manipulate people in order to achieve own goals; inclination to weariness of everyday routine; sexual irregularities (e.g. the need for strong stimuli, seductiveness, sexual immaturity, hyperactivity or frigidity) [77, 78, 79].

Histrionic personality disorder often co-occurs with a narcissistic personality, antisocial personality and ADHD [80]. In a study conducted by Erickson [81], 184 psychologists were diagnosing their patients with personality disorders on the basis of the DSM-IV criteria. It was observed that histrionic personality was diagnosed more frequently in women, while narcissistic personality was diagnosed more frequently in men.

If one were to emphasise from a histrionic personality

the desire to be in the centre of attention, the tendency to theatricality, the excessive emotional expression, the permissiveness towards one's own behaviours and actions, the desire to be admired and praised, the need for excitement, the tendency to succumb to the influence of others and circumstances, the dependence on the environment, the lack of tolerance for criticism and frustration, the inclination to weariness of everyday routine, the exaggerated focus on appearance and the tendency for infantile dependence on others, then such a set of features could characterise a certain type of media exhibitionist.

Material and method (constructing the Media Exhibitionism Questionnaire)

The work on the creation of the Media Exhibitionism Questionnaire consisted of several stages.

The first step of the work on the questionnaire was to extract 49 items, which were based on the theoretical foundations of media exhibitionism construct described in the first part of this paper. After the statements were separated, they were presented to the competent judges – clinical psychologists and psychology researchers – who assessed the accuracy of individual items on a scale from 1 (the least accurate statement with respect to the problem) to 5 (the most accurate statement with respect to the problem). This resulted in the selection of 20 statements (Appendix) which received the highest scores. Then, by means of an online random number generator (generujemy.pl), the individual items were assigned a location in the questionnaire. Thus prepared tool was then subjected to a pilot study. It was designed in an electronic version (Google Form) and sent to six competent judges, Facebook users, with a request to fill in and comment on the construction of items. As a consequence, several changes were introduced, mainly concerning the form and wording of statements regarding the publication of materials with naked body parts. Then the revised questionnaire was sent to a dozen or so Facebook users asking them to fill it out and send it to other users of the portal. In the second pilot study, 65 fully completed questionnaires (47 women and 18 men; SD=10.43) were collected; they were used to conduct a psychometric analysis of the tool. Statistical analyses were performed using IBM SPSS Statistics Version 25 [82].

In order to determine the factor structure, an exploratory factor analysis was carried out by means of

2. On January 1, 2022, the International Classification of Diseases ICD-11 officially entered into force in Poland. However, it will be several years before it becomes popular in clinical practice. It moves away from distinguishing individual types of personality disorders, which will be referred to by subsequent elements of media exhibitionism construct (narcissistic personality disorder and Histrionic personality disorder), to determine whether there is a personality disorder at all and to what extent. At the same time, the personal, interpersonal, professional and social functioning of the human being as well as disorders in the field of self-esteem and the possibility of self-direction are taken into account (see: E. Grzela, What will the new classification of ICD-11 diseases change in the field of psychiatry? (2022). <https://pulsmedycyny.pl/cownowa-klasyfikacja-chorob-icd-11-zmieni-w-obszarze-psychiatrii-1143069>). However, the division into types of personality disorders is still valid in the classification of mental disorders of the American Psychiatric Association, DSM-V, and it is similar to the division from the ICD-10, therefore it seems that the existence and use of Media Exhibitionism Questionnaire is justified.

the main components with Varimax rotation. Initially, the questionnaire consisted of 20 items. During the analysis, positions with factor loads below 0.4 and positions loading several factors to a similar degree were excluded. Eventually, the questionnaire consisted of 14 items and 4 factors: 1 – physical exhibitionism; 2 – exhibitionism

of narcissistic traits; 3 – emotional exhibitionism; 4 – exhibitionism of histrionic traits. The four-factor solution was adopted on the basis of theoretical assumptions. Table 1. presents a compound matrix for identified factors.

The reliability of individual factors and of the

Table 1. The compound matrix for identified factors

	Factor 1	Factor 2	Factor 3	Factor 4
19. I like it when Facebook users like the photos that show naked parts of my body (when I'm in underwear, a swimsuit, etc.).	0.828			
5. I like it when Facebook users comment on the photos that show naked parts of my body (when I'm in underwear, a swimsuit, etc.).	0.793			
15. I feel satisfaction when I see emotions expressed by people watching naked parts of my body (when I'm in underwear, a swimsuit, etc.).	0.763			
14. I post photos, videos or live broadcasts where I am wearing a swimsuit, underwear, etc. on Facebook.	0.642			
7. I like to be in the centre of attention.		0.834		
12. When I'm admired on Facebook, I feel pleasure.		0.654		
3. I post provocative content (photos, videos, entries) on Facebook so that people would pay attention to me.		0.603		
2. In my Facebook posts, I like to focus on my own affairs and needs.		0.592		
6. I am eager to participate in those Facebook groups where I get support for my problems.			0.805	
18. When I publish on Facebook, I feel a great relief (because: I get rid of problems, unpleasant feelings, painful memories, etc.).			0.794	
17. I like it when my Facebook friends support me with advice on how to solve the problem I wrote about.			0.704	
13. I think I am susceptible to the influence of other people.				0.796
1. I care about what my Facebook friends write about me.				0.753
8. I am vulnerable to criticism when it comes to the materials I post on Facebook.				0.660

entire tool was calculated with the use of the Cronbach's α coefficient for internal consistency. Table 2. presents the values of reliability for particular factors and for the whole questionnaire.

Table 2. The values of reliability coefficients (Cronbach's α) for the factors and the entire tool

	Cronbach's α
Factor 1	0.846
Factor 2	0.748
Factor 3	0.784
Factor 4	0.755
Entire tool	0.846

The analyses carried out showed a satisfactory level of reliability for the entire tool, as well as for the individual factors.

In the next part of the psychometric analysis of the tool, an analysis of the correlation of individual items with the overall results for the factor and the general scale was carried out by means of Spearman's rho coefficient. Table 3. presents the results.

The analysis showed the strongest relationships between factors and appurtenant items. These correlations are strong and positive.

The confirmatory factor analysis for the MEQ structure – standardised regression coefficients

Another part of the study was also conducted in electronic form using online Google Forms. The link to the online survey was again sent via the author's personal account (on Facebook). The link was accompanied by a request to send the survey to one's friends and paste it into one's Facebook wall. Thus – by means of the snowball sampling method – the study reached several hundred people. As a result, 554 people from all over Poland (426 women and 128 men) participated in this part of the study. The mean age was 26.77 (SD=9.34).

In order to confirm the validity of the factorial structure and questionnaire design, the CFA factorial analysis was carried out on a group of 554 people. Figure 1. illustrates the structure of the questionnaire with the coefficient loads (standardised regression coefficients).

The chi2 value was significant ($\chi^2=286.01$; $p<0.001$),

Table 3. The analysis of the correlation of the items with the identified factors and the overall result

	Factor 1	Factor 2	Factor 3	Factor 4	OVERALL RESULT
Mean interposition correlation	0.593	0.429	0.595	0.508	0.313
1. I care about what my Facebook friends write about me.	0.244*	0.353**	0.403**	0.876**	0.652**
2. In my Facebook posts, I like to focus on my own affairs and needs.	0.233	0.691**	0.289*	0.144	0.497**
3. I post provocative content (photos, videos, entries) on Facebook so that people would pay attention to me.	0.426**	0.599**	0.382**	0.333**	0.615**
5. I like it when Facebook users comment on the photos that show naked parts of my body (when I'm in underwear, a swimsuit, etc.).	0.773**	0.422**	0.297*	0.371**	0.565**
6. I am eager to participate in those Facebook groups where I get support for my problems.	0.242	0.248*	0.867**	0.331**	0.552**
7. I like to be in the centre of attention.	0.301*	0.830**	0.18	0.230	0.616**
8. I am vulnerable to criticism when it comes to the materials I post on Facebook.	0.225	0.156	0.345**	0.783**	0.515**
12. When I'm admired on Facebook, I feel pleasure.	0.447**	0.800**	0.312*	0.376**	0.701**
13. I think I am susceptible to the influence of other people	0.321**	0.301*	0.286*	0.791**	0.576**
14. I post photos, videos or live broadcasts where I am wearing a swimsuit, underwear, etc. on Facebook.	0.683**	0.363**	0.090	0.170	0.424**
15. I feel satisfaction when I see emotions expressed by people watching naked parts of my body (when I'm in underwear, a swimsuit, etc.).	0.824**	0.343**	0.299*	0.388**	0.532**
17. I like it when my Facebook friends support me with advice on how to solve the problem I wrote about.	0.223	0.399**	0.865**	0.407**	0.653**
18. When I publish on Facebook, I feel a great relief (because: I get rid of problems, unpleasant feelings, painful memories, etc.).	0.396**	0.439**	0.747**	0.372**	0.654**
19. I like it when Facebook users like the photos that show naked parts of my body (when I'm in underwear, a swimsuit, etc.).	0.797**	0.366**	0.336**	0.399**	0.559**

* $p < 0.05$; ** $p < 0.01$.

which indicated discrepancies between the observed covariance matrix and the one implied by the model. However, other indicators have shown a satisfactory agreement between the data and the model. The RMSEA fit index, the root mean square error of approximation, indicated a moderate fit of the model with respect to its estimation parameters. The acceptable limit for this indicator is 0.08, and in this model, the indicator value was 0.074. The Goodness of Fit Index (GFI=0.929) indicated a satisfactory data match, although the level of the Adjusted Goodness of Fit Index, AGFI was slightly lower than expected (AGFI=0.894). The Confirmatory Fit Index (CFI=0.925) was of satisfactory value. Also the SRMR index was of satisfactory value (SRMR=0.066). The variances for the model variables were positive and statistically significant.

HTMT analysis based on variance

To determine the differential validity, HTMT analysis based on variance was performed. It is assumed that if the HTMT value is below 0.9, then the differential validity is adequate to distinguish two separate constructs [83]. The analysis showed a satisfactory level of differential accuracy of the analyzed tool. Table 4. presents HTMT values for the identified factors.

Table 4. HTMT values for differential validity of media exhibitionism

	1	2	3	4
Physical exhibitionism	-			
Exhibitionism of narcissistic traits	0.664	-		
Emotional exhibitionism	0.427	0.732	-	
Exhibitionism of histrionic traits	0.229	0.523	0.494	-

The initial standards for MEQ

Based on the quartiles, 25% of the highest scores were extracted for each factor, and individuals in this group can be considered as exhibiting characteristics of a given type of exhibitionism. Table 5. presents the cutoff points for 554 respondents.

This will allow to analyse the results of research that compare different aspects of the functioning of media exhibitionists on Facebook, which will be the subject of further publications.

Conclusions

At this point, it is worth considering the limitations concerning the presented structure and the tool for its analysis. Firstly, the difficulties related to the creation of theoretical foundations for the construct of media

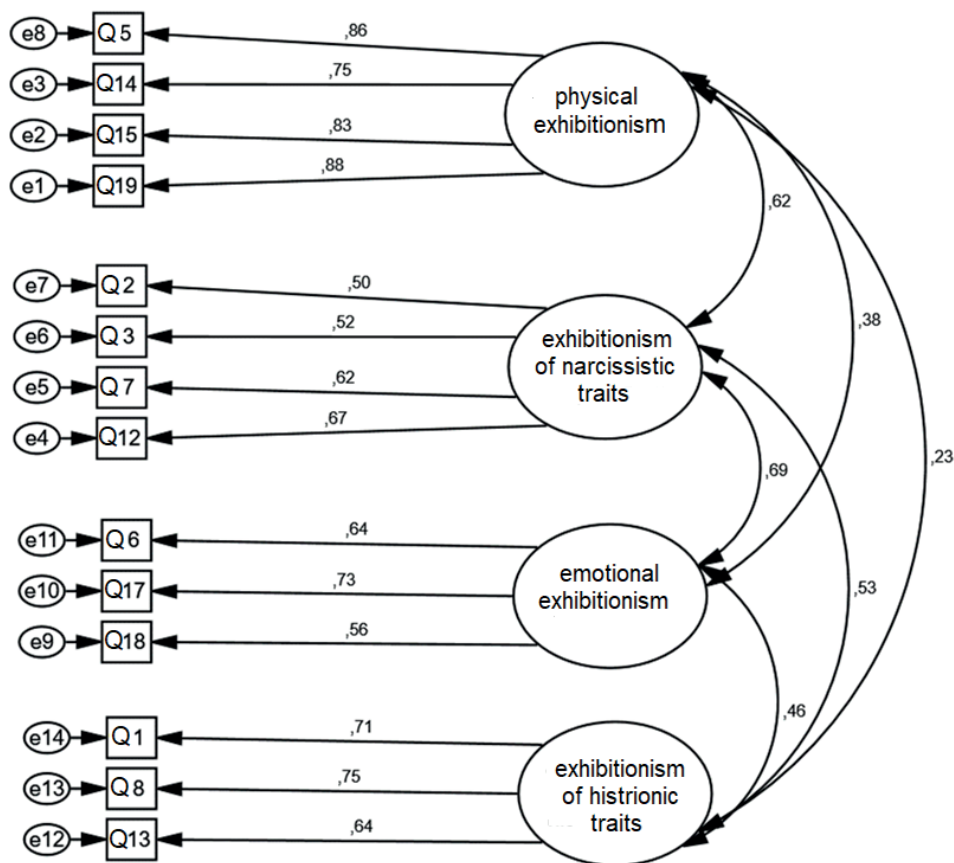


Fig. 1. The confirmatory factor analysis for the Media Exhibitionism Questionnaire - standardised regression coefficients (source: own resources)

Table 5. Cutoff points as initial standards setting a threshold point for the occurrence of exhibitionism

Scale	Cutoff point (25% of the highest results)	N (%)
Physical exhibitionism	4 and more	110 (19.9)
Exhibitionism of narcissistic traits	12 and more	147 (26.5)
Emotional exhibitionism	9 and more	148 (26.7)
Exhibitionism of histrionic traits	20 and more	174 (31.4)
Media exhibitionism	43 and more	161 (29.1)

exhibitionism should be mentioned. The use of clinical characteristics of exhibitionism, narcissistic and histrionic personality disorders, and the mechanism of emotional exhibitionism may raise doubts, all the more so because the new construct was supposed to address the functioning of healthy people. However, there are studies on narcissism [e.g. 84, 85], psychopathy [86] and mixed constructs such as Dark Triad and Dark Tetrad [87, 88] that prove that such an approach can succeed.

Another limitation concerns the experimental nature of construction of the authorial Media Exhibitionism

Questionnaire. A major limitation of that procedure is lack of any research on the theoretical validity of the method. This study should be completed in the future, e.g. by examining the extent of correlation with another, already known diagnostic method.

An important distorting factor at the MEQ construction stage could have been a selection of competent judges from among clinical psychologists. And, although each of them is also a scientific researcher and constructs psychometric tools, it would be beneficial to complement this group with a psychologist who, on an everyday basis, studies people's functioning in the media. In the future, in order to test the accuracy of this tool, it is worth conducting the survey in other social media.

It should also be noted that only Facebook users were surveyed, while the title of the article indicates that the discussion may apply to all users of media. However, Facebook has been ranked first in social media rankings in Poland for many years [89]. Moreover, the form and functionality that this portal provides are the most extensive among social media and basically within the entire Internet, as demonstrated in the first part of this text.

In conclusion, it is worth noting that the Media Exhibitionism Questionnaire can be employed in further

research as a tool to study the exhibitionistic behaviours of users of other social networking sites. In particular, it is worth surveying Instagram users, where there is greater anonymity and which abounds in nudity.

The Media Exhibitionism Questionnaire can be used to predict behaviours of social media users, to prevent disorders associated with the usage, as well as in the counselling regarding safe social media use and responsible development of self-image on the Internet.

Appendix 1. Media Exhibitionism Questionnaire before determining the factor structure.

The following are various statements that apply to the use of Facebook (FB). Please indicate to what extent you agree or disagree with each of these statements by marking one of the five possible answers (1-definitely not, 2-rather not, 3-difficult to say, 4-rather yes, 5-definitely yes). Try to describe what you really think.

1. I care about what my Facebook friends write about me. *
2. In my Facebook posts, I like to focus on my own affairs and needs. *
3. I post provocative content (photos, videos, entries) on Facebook so that people would pay attention to me. *
4. I express my emotions vividly and with full expressiveness.
5. I like it when Facebook users comment on the photos that show naked elements of my body (when I'm in underwear, bathing suit, etc.). *
6. I am eager to participate in those Facebook groups where I get support for my problems. *
7. I like to be in the centre of attention. *
8. I am vulnerable to criticism when it comes to the materials I post on Facebook. *
9. I willingly tell other people about my personal problems.
10. I post provocative content (photos, videos, entries) on Facebook in order to collect as many "likes" as possible.
11. I consider my need to be watched by Facebook users normal.
12. When I'm admired on Facebook, I feel pleasure. *
13. I think I am susceptible to the influence of other people. *
14. On Facebook, I post photos, videos or live broadcasts where I am wearing a swimsuit, underwear, etc.*
15. I feel satisfaction when I see emotions expressed by people watching naked parts of my body (when I'm in underwear, bathing suit, etc.). *
16. It makes me feel wonderful when not only friends but also strangers are interested in my

activity on FB (posts, photos, videos).

17. I like it when my Facebook friends support me with advice on how to solve the problem I wrote about. *
18. When I publish on Facebook, I feel a great relief (because: I get rid of problems, unpleasant feelings, painful memories, etc.). *
19. I like it when Facebook users like the photos that show naked parts of my body (when I'm in underwear, a swimsuit, etc.).*
20. I am relieved by the analysis of my problems (e.g. concerning unpleasant feelings or painful memories) in the public forum.

The items that were included in the final version of the 14-items questionnaire were marked with an asterisk (*).

Appendix 2. Media Exhibitionism Questionnaire before determining the factor structure - original version in Polish.

Poniżej znajdują się różne stwierdzenia, które odnoszą się do korzystania z Facebooka (FB). Wskaż w jakim stopniu zgadzasz się bądź nie zgadzasz się z każdym z tych twierdzeń, zaznaczając jedną z pięciu możliwych odpowiedzi (1-zdecydowanie nie, 2-raczej nie, 3-trudno powiedzieć, 4-raczej tak, 5-zdecydowanie tak). Postaraj się określić to, co naprawdę sądzisz.

1. Przejmuję się tym, co moi znajomi na Facebooku o mnie piszą. *
2. W moich wpisach na Facebooku lubię koncentrować się na własnych sprawach i potrzebach. *
3. Zamieszczam prowokacyjne materiały (zdjęcia, filmy, wpisy) na Facebooku po to, aby ludzie zwrócili na mnie uwagę. *
4. Swoje emocje wyrażam żywo, z pełną ekspresją.
5. Lubię, gdy użytkownicy Facebooka komentują zdjęcia, na których widać nagie części mojego ciała (gdym jestem w bieliźnie, kostiumie kąpielowym itp.). *
6. Chętnie udzielam się w tych grupach na Facebooku, w których uzyskuję wsparcie dla moich problemów. *
7. Lubię być w centrum uwagi. *
8. Jestem słabo odporna/-y na krytykę, jeśli chodzi o materiały, które zamieszczam na Facebooku. *
9. Chętnie opowiadam innym ludziom o moich problemach osobistych.
10. Zamieszczam prowokacyjne materiały (zdjęcia, filmy, wpisy) na Facebooku po to, aby dostawać jak najwięcej lajków.
11. Uważam swoją potrzebę bycia oglądaną/-ym przez użytkowników Facebooka za naturalną.
12. Kiedy jestem podziwiana/-y na Facebooku,

- odczuwam przyjemność. *
13. Uważam, że jestem podatna/-y na wpływ innych ludzi. *
 14. Zamieszczam na Facebooku zdjęcia, filmiki czy transmisje na żywo, na których jestem w kostiumie kąpielowym, bieliźnie itp. *
 15. Odczuwam satysfakcję na widok emocji wyrażanych przez ludzi, którzy oglądają na Facebooku nagie części mojego ciała (w bieliźnie, kostiumie kąpielowym itp.). *
 16. Czuję się fantastycznie, gdy nie tylko znajomi, ale i obce osoby interesują się moją aktywnością na FB (wpisy, zdjęcia, filmy).
 17. Lubię, gdy znajomi z Facebooka wspierają mnie poprzez rady, jak rozwiązać problem, o którym napisałam/-em. *
 18. Kiedy publikuję na Facebooku, to czuję dużą ulgę (bo: pozbywam się problemów, przykrych uczuć, bolesnych wspomnień itp.). *
 19. Lubię, gdy użytkownicy Facebooka lajkują zdjęcia, na których widać nagie części mojego ciała (gdy jestem w bieliźnie, kostiumie kąpielowym itp.). *
 20. Przynosi mi ulgę analiza moich problemów (np. dotyczących przykrych uczuć czy bolesnych wspomnień) na forum publicznym.
- Pozycje, które znalazły się w ostatecznej, 14-itemowej wersji kwestionariusza, zostały oznaczone gwiazdką (*).

Conflict of interest

The author has declared no conflict of interest.

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