The effect of the use of profile badges on social comparison at social media among men

Author: Amber van Deursen
University of Twente
P.O. Box 217, 7500AE Enschede
The Netherlands

ABSTRACT,
The purpose of this research is to provide insight knowledge in order to contribute to a reduction of the negative effects on the well-being caused by social comparison among men. This was carried out with a new intervention called 'Profile Badges'. The study was performed through an experiment, using a control group and an experiment group. First, a prototype was made, which represented a video of an Instagram feed. Both groups were asked to fill out a PANAS survey before and after watching the video. The experiment group watched the video with profile badges and the control group without profile badges. The profile badges managed to cause a lower increase of the negative affect and a lower decrease of the positive affect. After watching a video with profile badges, the experiment group experienced less 'negative' feelings compared to the control group. The experiment group also experienced more 'positive' feelings compared to the control group. This leads to a higher well-being of the participants.

Graduation Committee members:
Dr. R. Effing

Keywords
Social comparison, social media, profile badges, well-being, social activities, digital badges

1. INTRODUCTION

Problem statement

Opportunities for the social comparison effect to happen are created on social networking sites, such as Instagram, Facebook, Snapchat and TikTok. Upward social comparison is when people start comparing themselves with others who seem to be superior, and can be looked at as a positive image. Downward social comparison arises when people start comparing themselves with others who seem to be inferior, and can be associated with having negative characteristics (Wills, 1981; Wood, 1989). Self-esteem and upward social comparison mediated the connection between Social Networking Sites and the well-being of users (Wang et al., 2017). Social networking sites provide the opportunity for users to choose what pictures and content they want to show, to present their ideal selves (Rosenberg & Egbert, 2011). This contributes to showing others a 'perfect' image instead of the reality and face-to-face interactions. Users of social networking sites are more likely to post pictures of their vacation or with their friends at parties. This makes it more attracting to compare oneself to another, not even talking about the models or professional athletes. In relation to the general view that people on social networking sites rather provide positive instead of negative images, it is found that people who use Facebook on a frequent base, expect others to be happier and more successful (Chou and Edge, 2012). There is still an undecided conclusion whether social media affects the well-being of people in a negative or positive way. The main negative effects of social media are anxiety, loneliness, and depression. Earlier research shows that individuals who follow more fitness boards on Pinterest have a higher tendency to show extreme weight-loss behaviours. Also, the image of having a perfect female body was related to extreme weight-loss behaviours and social comparison (Lewallen & Behm-Morawitz, 2016). However, there is also a positive effect of social media, the opportunity to connect with more people, despite how big the distance is (Social media use can be positive for mental health and well-being, 2020).

Research objective

The purpose of this research was to increase knowledge of the extent of social comparison among men at social media and whether this can be improved by using profile badges. The gap between negative effects of social media, talking especially about social comparison, is still relatively big, compared to a situation where there is no social comparison or other negative effects. A previous study of Vreeman (2023) already investigated the comparison effect among women, and showed a significant result that profile badges improved the well-being of women. In this paper, among others, this result on women will be compared to the result of men.

Research question

The research question of this paper is: 'To what extent do profile badges reduce the negative effects on well-being caused by social comparison among men?'

There is also a follow up question, which can be of importance for this research: 'Is there a significant difference of the effect of profile badges between individuals who socially compare more than individuals who compare less?'

2. LITERATURE REVIEW

2.1 Social comparison on social media

One of the main negative consequences of social media is social comparison. The likelihood to compare oneself to another differs per individual, this variable is also called Social Comparison Orientation (SCO) (Vogel et al., 2015). The study of Vogel et al. showed that people with a higher tendency for SCO had a lower self-esteem and lower self-perceptions, than people who are less likely to compare themselves with others. Increases in SCO also leads to a decrease in the well-being of people (Reer et al., 2019). The influence of another concept 'Fear of Missing out' (FoMo) was also found to be positively related to SCO. The study of Reer et al. (2019) showed that increases of Social Media Engagement (SME) lead to a higher level of loneliness, anxiety, and depression. Which means that an increase in SME leads to a decrease of the well-being of people.

Another study found out that interaction and browsing on Instagram was associated with less loneliness. However, broadcasting on Instagram tends to lead to higher loneliness (Yang, 2016). Loneliness can cause people to develop symptoms of depression. Individuals who do mind that they were tagged in rather unflattering pictures are more likely to satisfy the criteria for Major Depressive Disorder (MDD). This also applies to people who have a higher tendency to compare themselves with others, and those who would rather not post pictures of themselves together with others (Robinson et al., 2019). It was also found that individuals who score higher on the Social Media Addiction Scale have a higher tendency to meet criteria for MDD.

2.2 Profile badges

In this research it will be tested whether the introduction of profile badges can have a positive effect on the social comparison at social media. Badges are digital credentials, which can be defined as an assurance that you have the quality or characteristic you say you have, and you are the person who you say you are (Grant, 2014). Digital badges can act as a reward of user achievements, and is getting more common within online communities and social media sites (Anderson et al., 2013). The badges can act as a reward or incentive, and at the same time provide information about someone's identity. The digital badges are able to 'connect' and to associate learning, assessing, and link chances with each other (Grant, 2014). The use of digital badges is already common within game contexts, simulations, and for educational purposes. Badges can consist of specific achievements or skills of an individual, which can be represented in different levels (Finkelstein et al., 2013). Digital badges can reinforce engagement, progress, and motivation. When talking about profile badges, it is an easy way to quickly see what the other person is known for or what kind of skills they mastered. It

allows people to show successes and achievements, which gives opportunity for people of all ages to show more of their personal identity.

Designing effective digital badges is complex because of psychological factors playing a role in recognition processes, orientation of, and obtaining digital badges (Anderson et al., 2013). The icons of the badges have to be clear and easy to understand with an attractive look. To design the profile badges with different icons, the designing platform Canva was used.

2.3 The difference in gender

Whether there are gender differences in using social media was contradictory. Multiple studies showed that there are differences between the use of social media, while other researches did not. Earlier research showed that females are more tended to spend more time on Facebook than males. This also applies to losing more sleep, feeling more connected to Facebook friends than the ones they see on a daily base, that Facebook could cause stress and addiction, and that the pictures on Facebook can lead to a negative self-body image (Thompson, 2012). According to the research of Shepherd (2016) females are more likely to keep their Facebook profiles longer, and are more thoughtful about their use of Facebook. Another finding is that women use Facebook more often than men. However, men do use mediated communication less often than women, while females are more tended to use text messaging, video calls, and active use of social media (Kimbrough et al., 2013). Another study showed that men use the Internet more than women, however females tend to report more computer anxiety (Jackson et al., 2001). Women do perform better economically and take less risks, compared to men. Another aspect of the study was that men are more likely to accept friend requests from women than vice versa (Szell & Thurner, 2013).

Looking at the differences the genders show at social media, the structure of an Instagram feed is also one. Instagram explained the most important signals across someone's feed. First, the activity a person shows, meaning the posts a person likes, commented on, or shared. Second, the information about the post, which can be the popularity or the location. Instagram also looks at the information about the person who posted and the history someone has of interacting with another (Mosseri, 2023). These indicators of an Instagram feed differ between men and women. Men tend to like or comment on different posts than women, and the interaction with other people is unalike.

2.4 Related research

A previous study of building better digital badges within games or simulations, showed that designers with a better design, deploy, and judicial badging system causes a more effective implementation withing gaming areas and simulations (McDaniel & Fanfarelli, 2016). Therefore, it is essential to take the design of badges seriously.

Another study, looking at the effect of profile badges on the well-being of women, related to social comparison at social media, was already done one year ago (Vreeman, 2023). From this study it can be concluded that there is a significant effect of profile badges reducing the negative effects of social media, related to women. The participants showed a higher well-being with profile badges than without.

3. METHODOLOGY

3.1 Research design

This research can be described as an experimental study. This study aims to improve a new research method for a known problem and will be examined using an experiment. In this experiment will be an independent and a dependent variable. Previous research about reducing the negative effects of social media with profile badges, looking only at women, was done by Vreeman (2023). The main difference between the studies will be the gender, whether the profile badges will also have a positive effect on the well-being of men.

The research started off with a literature study. This literature was mainly about the negative effects of social media, the consequences of social comparison, and the purpose of digital badges. This literature knowledge was collected from different articles found on Google Scholar, CORE, and Scopus. The articles were discovered using relevant keywords, such as 'social comparison', 'social media', and 'digital badges.'

3.2 Data collection

To carry out the experiment and collect the data, a set up for the experiment was made in advance. The chronological order of the experiment can be found in table 1.0 below.

40 male participants	
20 participants in control group	20 participants in experiment group
View badge definitions	
PANAS	
Video with profile badges	Video without profile badges
PANAS	
INCOM & systematic factors	

Table 1.0 – The set up for the experiment in the right order, divided into the two different sub-groups.

The experiment was carried out with 40 male participants. For this research male participants were chosen, because it was shown by Vreeman (2023) that profile badges have a positive effect on the well-being of women related to social comparison at social media. Therefore, it is interesting to find out if there is also a relation between the profile badges and men. The participants will be aged from 18 to 28, and will be chosen randomly to make the experiment more reliable. Within the research there were 4 different nationalities, with a majority of Dutch men. The other nationalities were German, Italian, and French. To make the outcome even stronger, the participants will also be selected randomly to the control group or the experiment group.

The sequence of the experiment can be seen in table 1.0 above. First, the participant will be chosen to be either in the control or the experiment group. The participants are randomly selected to the certain group. When in the experiment group, they would receive a sheet, which showed the profile badges as icons with their definitions and warnings (can be seen in figure 2.0). The participant had two minutes to read through the icons, while the control group did not receive a sheet. The participants were asked to take a survey on a laptop via Google Form. This survey consists of a PANAS questionnaire. How the surveys are put together will be explained in detail below in part 3.3. The

experiment and control group both watched a video. The video for the experiment group was an interpretation of an Instagram feed with the profile badges inserted, while the video for the control group showed an Instagram feed without profile badges. After watching the video, the participants were asked to fill out the other part of the survey, consisting of again a PANAS questionnaire, and a few questions of INCOM.

3.3 Surveys

During the experiment the participants were asked to fill out a form via Google Forms. The survey is based on a Positive Affect Negative Affect Scale (PANAS). In other studies, it has been discovered that positive and negative affect can be described as dominant and independent aspects (Watson et al., 1988). To measure these dimensions in a reliable way, a 10 words scale was developed for both positive and negative feelings. For each word the participant had to choose from 5 options, the extent he/she has felt this way. The answer possibilities were 1) very slightly or not at all, 2) a little, 3) moderately, 4) Quite a bit, 5) extremely. The participants were asked to fill out the PANAS form before and after watching the video. The video represented an Instagram feed, the control group watched a video without profile badges, and the experiment group with profile badges. Because the participants filled out the survey before and after watching the video, the effect the video had on their well-being could be measured. It could be seen what influence the video had on the positive and negative feelings. To extent the image of social comparison and answer the second research question, the participants were asked three questions about the level of social comparison in their daily life. These results were measured using an INCOM-scale (Iowa-Netherlands Comparison Orientation Measure). This scale helps to define which participants are high and low in their likelihood to compare themselves with others (Baldwin Tigges, z.d.). The questions chosen were: 'I always pay a lot of attention to how I do things compared to how others do things?', 'I often compare how I am doing socially with others?', 'I often compare myself with others with respect to what I have accomplished in life?'. As last, the participants had to answer some questions about their personal information: age, nationality, and their point of view of this research.

3.4 Prototype of profile badges

To make the profile badges look realistic, they were added to a real Instagram feed by implementing this on Clipchamp. Clipchamp is a platform to edit or make high-definition videos. The prototype was a video screenshot of Instagram, where the profile badges were pasted, as can be seen in Figure 1.0 below. The profile badges were icons used from Canva.com. This was also done for previous research of the effectivity of profile badges on women (Vreeman, 2023). Men are less interested in beauty content, looking at make-up or fashion. Also, an Instagram feed for women is different compared to a feed for men. Therefore, a new prototype was made, which is a video of approximately two minutes. To not let the result of well-being be dependent on the time spent on watching the Instagram feed, it was chosen to use a video.
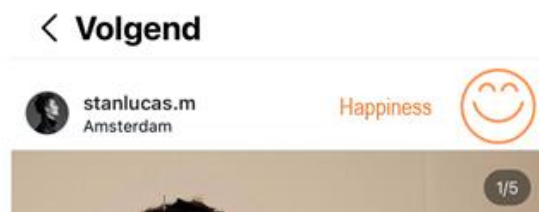

Figure 1.0 – The prototype of an Instagram post with a profile badge

3.5 Data analysis

To discover whether there is a relation between men and the use of profile badges, the data retrieved from the experiment had to be analyzed. This data will be analyzed using Excel and the program R-studio. The sample size is not very large, so this means that there would be a higher possibility of a deviation, looking at the normal distribution. The data was examined using independent T-Tests, because in this research there were two samples. The independent T-Tests would show whether there is a significant difference between the samples. Before using a statistical test, it must be confirmed that the data is not deviated much from normality. To check the deviation of the collected data, histograms, Q-Q plots, skewness, and a normality test was used.

The results of the survey will be analyzed using the PANAS-scale. For this research the PANAS scale was used before and after the participants watched the video. Normally, there are two variables, the positive affect (PA) and the negative affect (NA). However, in this study there is a positive affect after (PAA), positive affect before (PAB), negative affect before (NAB), and negative affect after (NAA).

In the survey people were also asked for data as age and nationality to include in the research. These are variables which can have an influence on the social comparison. Both variables were not normally distributed. Therefore, the Mann-Whitney test, one-way Anova, and Kruskal-Wallis test can be used.

The main purpose of the first research question is to acquire the difference between the experiment and the control group, if any. To analyze this difference, if the data is normally distributed, independent t-tests can be used. If not normally distributed, the Kruskal-Wallis test could be used, which fits for a situation with two groups or more. When examining within the sub population, if normally distributed, paired sample t-tests were used.

To answer the second research question, looking specifically at the people who compare themselves more in daily life. To analyze whether there is a difference in the effect of profile badges between individuals who show more social comparison than people who show low comparison, the Mann-Whitney U test can be used. To discover the correlations within the sample, when normally distributed, the Pearson's Correlation Coefficient was used. Which can be acquired through a Bivariate Correlation Analysis. To examine the correlations when the data is not normally distributed, the coefficient Kendall's Tau was used.

3.6 Reliability

Earlier research showed that PANAS has a high reliability (Ostir, Smith, Smith, & Ottenbacher, 2005). Which is important considering this method measures the effect of the prototype on the well-being of the participants. According to Engelen et al. (2006) the reliability of the NA-scale is 0.85 and 0.79 of the PA-scale.

It is important to look at the reliability of t-tests when working with a small population. With a sample size of at least fifteen, normally distributed, and where participants are selected randomly, t-tests can be used (Skaik, 2015).

4. PROFILE BADGES

The profile badges as categories are Achiever, Promoter, Happy couple, Happiness, Real-life, Skill, and Traveler, as introduced by Vreeman (2023) (Figure 2.0). For each badge there is a definition including their warning, to make it understandable for individuals what the purpose of each badge is (Figure 2.0). These warnings help understand individuals why they should not socially compare themselves. When this intervention is implemented, individuals are able to click on the badge and access the warming message. This gives the individuals a choice to either ignore or notice the badge, because not everyone is experiencing social comparison. The warnings of the badges are carefully written and in a positive way. It is important that the badges will not make people feel ashamed or insecure to have it. The profile badges will be placed right next to the username above the post of that certain person. It was chosen to not only use the name of the badge, but also an icon, to make it more recognizable for the users. There was a change made for the new target group in comparison with the research of Vreeman (2023), instead of the profile badge 'beauty' it was chosen to use a new badge 'traveler'. Most men are less into the category 'beauty', and travelling is becoming more popular. It will also be possible for users to give feedback or new suggestions for the badges, in order to make them optimal.

Figure 2.0 – The profile badges used for the experiment group

4.1 Design of the badges

It was not possible to design the profile badges down to the last detail, because of time shortage. To make them optimal, individuals could be asked and it is essential to do research to determine the best design of the badges. However, the badges already have a decent design and make a good representation of the intervention. To design the badges Canva.com was used, which automatically approves to use the badges on social media, according to the general terms and conditions in June 2023.

5. RESULTS

5.1 First research question

For this research the PANAS scale was used before and after the participants watched the video. Normally, there are two variables, the positive affect (PA) and the negative affect (NA). However, in this study there is a positive affect after (PAA), positive affect before (PAB), negative affect before (NAB), and negative affect after (NAA). In order to calculate the result of the PANAS scale, the PAA will be subtracted from PAB (PABminPAA), and the NAA will be subtracted from NAB (NABminNAA). To retrieve the results the sum of both the positive concepts and negative concepts were calculated.

To answer the main research question 'To what extent do profile badges affect the social comparison at social media among men?' the PABminPAA and NABminNAA were analysed. The mean PABminPAA of the experiment group was 0,350, and of the control group it was equal to 0,400. So, the positive affect within the experiment group increased with 0,050 less than within the control group. The mean NABminNAA of the experiment group is -0,100 and -0,250 of the control group. This means that the negative affect within the experiment group is 0,150 less than within the control group.

Looking at the results, the hypothesis cannot be rejected. Because the positive aspects decreased less and the negative aspects increased less within the experiment group.

5.2 Second research question

The second research question was about whether there is a difference in the effect profile badges have on individuals who show more social comparison than individuals who do less. To answer this question, the results of the INCOM scale, the PABminPAA, and the NABminNAA were used. The sample was parted into a group which shows higher social comparison and a group which shows less social comparison. These variables were analyzed with the Pearson correlation coefficient and the bivariate correlation analysis.

5.2.1 Correlations/ significancy

There were some correlations found when analyzing the daily social comparison with the PABminPAA and the NABminNAA. For the control group there were no correlations found. However, for the experiment group there was a correlation between the daily social comparison and the PABminPAA. This also applied for the NABminNAA and daily social comparison.

There is not a correlation between the daily social behavior and PABminPAA within the control group. However, it can be checked whether there is a correlation between one of the components of daily social comparison and PABminPAA. After the results there was still not a correlation between one of the components of daily social comparison and PABminPAA within the control group. Looking at the correlation between the NABminNAA and the social comparison in daily life, it is also statistically not significant. After looking at the separate components of daily social behavior, there was one slight correlation found. This correlation is between ComparingInDoingThings and NABminNAA (r=0.400, p=0.059). This can be defined as that the participants who tend to compare how they do things to how others do things, are more likely to have a higher increase of the negative affect.

Looking at the variables of daily social comparison and PABminPAA within the experiment group, there is a positive correlation (r=0.348, p=0.041). This means that participants who have a higher decrease of the positive affect, are more likely to compare themselves with others in their daily life. There is also

a positive correlation in the experiment group between the daily social comparison and NABminNAA (r=0.486, p=0.005). This means that participants who have a higher increase of the negative affect, are more likely to compare themselves with others in their daily life.

To answer the second research question, the differences between the group with high comparison and the group with low comparison should be examined. It was chosen to split the data with an average outcome of 3, looking at the variable daily social comparison. The number of participants with a low social comparison was 21 (LowC), and the number of participants with a high social comparison was 19 (HighC). To determine the results the Mann-Whitney U test was used, because of the small sample sizes which are not normally distributed. To analyze the differences, as can be seen in table 2.0 below, the variables HighC-NABminNAA, HighC-PABminPAA, LowC-NABminNAA, and LowC-PABminPAA were used.

	Mean E	Mean C	Difference (C-E)	p
HighC-NABminNAA	0,129	0,256	0,127	0.712
HighC-PABminPAA	0,373	0,421	0,048	0.301
LowC-NABminNAA	0,08	0,242	0,162	.975
LowC-PABminPAA	0,335	0,374	0,039	0.074

Table 2.0 – Differences of sub-groups, after splitting the sample in two different groups. E = experiment group, C = control group, p = p-value.

Looking at the results in table 1.0 above, there are no significant differences found. The only result which shows the most difference is the sub-group with a low daily social comparison analyzed with the PABminPAA. The difference between the experiment and control group was 0.039 with a p-value of 0.074. As can be seen in the table there is a slight difference between the experiment and the control group. Looking at the subgroup HighC-NABminNAA, the negative affect increased more in the control group after watching the video (0.127). This also applies to the subgroup LowC-NABminNAA (0.162). Within the subgroup HighC-PABminPAA was only a small difference between the control and experiment group (0,048).

After analyzing the results, it can be said that the group with low comparison as the group with high comparison, have a smaller decrease of the positive affect in the experiment group. The increased negative affect is also less in the experiment group than in the control group. However, as can be seen in table 2.0, there were no significant differences between the low and high comparison samples, analyzed with the daily social comparison. Therefore, the second research question must be answered with that there are no significant differences in the effect of the profile badges between individuals who socially compare more than the individuals who compare less.

5.3 Other variables
The participants were also asked for their age and nationality. These might be variables which can have an influence on social comparison and the well-being. To make the research more reliable, these variables were analyzed.

5.3.1 Age
To determine whether there is a correlation within the variable 'age', the bivariate correlation analysis was used. It was found that there is no to only a small correlation, so the age has probably not influenced the results of PANAS. The average age was equal to 22.2.

5.3.2 Nationality
It is important to take into account the nationality of the participants, because the use of social media and social comparison can be different within other cultures. The different nationalities which participated in the study were Dutch, Italian, French, and German. This means that all the participants are European. There were no correlations found between the nationality and PABminPAA or NABminNAA when looking at the entire population. This means that the nationality did probably not interfere with the PANAS scale.

5.3.3 Differences control and experiment group
There is a slight difference of the average PAA and PAB between the control and experiment group. The average PAA of the control group is higher (16,4) than the average of the experiment group (15,05). This also applies for the average of the PAB, which is 16,8 in the control group and 15,4 in the experiment group. This means that the participants in the control group have a higher positive affect before and after the video comparing to the experiment group.

6. DISCUSSION
6.1 Interpretation
One reason the profile badges were designed for, was to reduce the social comparison at social media. Another goal was to reduce the negative effects this social comparison had on the well-being of individuals. Looking at the results, it was found that the profile badges slightly reduced the negative effects on the well-being, with a NABminNAA score of -0.100. The experiment group experienced a smaller increase of the negative affect compared to the control group. This can be defined as that the experiment group experienced less 'negative' feelings after watching the video compared to the control group. There was still an increase in the negative affect within the experiment group, but the profile badges did manage to make this effect smaller. So, the profile badges did not take away the negative effects on the well-being completely, but for some part. The profile badges also managed to cause a lower reduction of the positive affect within the experiment group, with a PABminPAA score of 0.350. Participants tend to feel less positive after watching the video, profile badges were able to decrease this effect. This can also be defined as that the experiment group experienced more 'positive' feelings after watching the video compared to the control group. Looking at the results of the experiment group, there was still a decrease of the positive affect. However, considering that this decrease was less with profile badges is an improvement.

There were also some correlations found, when looking into the people who are more likely to compare themselves and their results of the PANAS. There was a correlation between the daily social comparison (INCOM) and the PABminPAA within the experiment group. This means that participants who have a higher decrease of the positive affect, are more likely to compare themselves with others in their daily life. This also applied for

the NABminNAA and the daily social comparison within the experiment group. The participants who have a higher increase of the negative affect, are more likely to compare themselves with others. For the control group there was one correlation found between the component 'ComparingInDoingThings' and the NABminNAA. Which means that participants who compare more in how they are doing things to how others do things, are more likely to have a higher increase of the negative affect.

The second research question must be answered with that there are no significant differences in the effect of the profile badges between individuals who socially compare more than the individuals who compare less. After analyzing the results, it can be said that the group with low comparison as the group with high comparison, have a smaller decrease of the positive affect in the experiment group. The increased negative affect was also less within the experiment group than within the control group. However, there were no significant differences found between the low and high comparison samples, analyzed with the daily social comparison.

6.2 Differences with thesis on women

Last year this study was done focusing on women by Vreeman (2023). It is also interesting to look at the difference men and women show in the experiment. For women the results showed that the NABminNAA was lower in the control group than in the experiment group. The mean of the experiment group was 0.055, and the mean of the control group -0.1125. This can be defined as a higher negative affect in the control group than in the experiment group. Looking at the results of the men, the NABminNAA was also slightly lower in the control group than in the experiment group. For both genders it means that the negative affect increased more in the control group than in the experiment group.

The PABminPAA of women was higher in the control group than in the experiment group. The mean of the experiment group was 0.3562, and the mean of the control group was 0.6820. This means that the positive affect decreased more in the control group than in the experiment after watching the video. Looking at the results of men, the PABminPAA was also higher in the control group than in the experiment group. For both genders it means that the positive affect decreased more in the control group than in the experiment group. However, this difference is slightly higher for women than for men.

If female participants in the control group had a higher score on social comparison, they were more likely to have a higher increase of the negative affect, and a higher decrease of the positive affect. However, this did not apply for the experiment group. For male participants there was a correlation found between the positive affect and the social comparison in daily life. This means that participants who have a higher decrease of the positive affect, are more likely to compare themselves with others in their daily life. The results of the different genders are not the same. For females there was a correlation between the positive and negative affect, and the daily social comparison. For men there was only a correlation between the positive affect and daily social comparison.

6.3 Implications

The results of this research can provide new insights into whether the intervention of profile badges is able to reduce the negative effects on the well-being caused by social comparison. This research, together with the study of Vreeman (2023), show how the different genders react to the profile badges. Because the prototype represents an Instagram feed, it would be a good implementation for Instagram. However, this intervention can also be used for other social media platforms, such as Facebook, Snapchat, and TikTok.

6.4 Limitations

This research had some implications, as every research has. The most obvious limitation of the research is the small samples. There were only 40 participants, of which 20 in the control group and 20 in the experiment group. These small sample sizes made the statistical tests less reliable. When analyzing independent variables on the PANAS results, the outcome is not guaranteed, because when there was not a normal distribution, less dependable tests were performed.

There was a difference found between the control group and experiment group. The control group has a higher average PAA and PAB, compared to the experiment group. This could have an influence on the results. This can be caused because the participants in the control group might have experienced higher 'positive' feelings before and after watching the video. It can also be caused because the setup of the experiment group is already different. The experiment group starts with reading the warning messages of the profile badges, while the control group started directly with the PANAS survey.

There were also correlations found between the total daily social comparison and NABminNAA within the experiment group. This also applies for the total daily social comparison and PABminPAA. However, there were no correlations found between the total social comparison and NABminNAA or PABminPAA within the control group. This shows a difference between both groups, even though the participants were chosen randomly.

7. CONCLUSION

The purpose of this research is to answer the research question: 'To what extent do profile badges reduce the negative effects on well-being caused by social comparison among men?'. The profile badges were designed and tested through an experiment with a control and experiment group. After analysing the results, it was found that profile badges manage to cause a lower increase of the negative affect and a lower decrease of the positive affect. After watching a video with profile badges, the experiment group experienced less 'negative' feelings compared to the control group. The experiment group also experienced more 'positive' feelings compared to the control group. This leads to a higher well-being of the participants. However, this research was done with only a small sample, which is a limitation of this study. To indicate whether the profile badges could be a new invention, further research needs to be done with a higher sample size. this leads to normal distributions, and then more reliable statistical tests can be done. The results of the PANAS also showed a difference between the experiment and the control group, where the positive affect before and after watching the video of the control group are higher. Also, there were correlations between the well-being before and after watching the video and the daily social comparison within the experiment group. There were no correlations found between the variables within the control group. Even though the participants were selected randomly, there could still be a difference between the participants in the control group compared to the participants in the experiment group.

Hence, this research can be of importance to reduce the negative effects of well-being caused by social comparison among men. The results gave significant answers, and can be used for further research or implementation on social media platforms.

A.1 The profile badges and their warnings

Below the different profile badges used can be seen including their warnings and definitions.

Achiever

This person works hard for something and wants to share that. Though, remember that achievers will post mainly about that, while other aspects of their life might not be posted, such as friends, relaxing, and time off. Looking to an achiever profile, might give you the idea that you have to work hard always, but this is not the case. Therefore, an achiever page can be inspirational, but remember that you can mostly not compare your life fairly to their social media posts.

Promotional

Influencer marketing is a common practice nowadays. A profile having this badge sells or promotes something. This means that content might be meant to convince you. Remember that this post is not only for entertainment purposes. Sometimes, the purpose of promotional posts is to give you a feeling that you really need something, or that you are worth less if you do not have/ do something.

Happy couple

Relationships go with ups and downs. We love the ups and on the other hand would like to forget about the downs. This account shares the beautiful sides of being in a relationship, however, the downs are not, or represented. Therefore, it wouldn't be fair to take this into account as a reference for your relationship (status). Therefore, you better do not!

Happiness

Life can bring many beautiful moments with friends, family, or beautiful places. This person shows their happy moments to their followers. However, everybody has their struggles. This person prefers to post only about happy parts of life. Therefore, it can be fun to watch the profile of this person but comparing your life to their posts would not be fair.

Real-life

This person likes to keep it real. Many people on social media only post about the best moments in life, however this person does not mind showing also the less beautiful moments. Seeing posts of this person might give you a sense of recognition. Although every person chooses what to share about themselves and what not, this person shares fairer information about themselves than people not having this profile badge.

Skill

Becoming skilled at something takes time and practice. People with this badge are likely to have put a vast number of hours in learning the skill they currently have. It is good to remind that from time to time. Being not as skilled as them is totally fine since you made other life choices. The latter also means that comparing yourself wouldn't be fair. Be proud of what you have accomplished and accept that there is always someone working harder for it.

Traveller

Being a traveller seems like the perfect life for most people. Flying to a tropical island or backpacking through Thailand. But remember that for students or people with a fulltime job this is hard to accomplish. You have duties and deadlines to meet. Travelling is also very expensive and therefore not possible for many people. Remember that daytrips and the small things can be just as fun.

Figure 2.0 – The profile badges with their definitions and warnings

8. REFERENCES

Wills, T. A. (1981). Downward comparison principles in social psychology. Psychological Bulletin, 90, 245–271. doi:10.1037/0033-2909.90.2.245

Wood, J. V. (1989). Theory and research concerning social comparison of personal attributes. Psychological Bulletin, 106, 231–248. doi:10.1037/0033- 2909.106.2.231

Rosenberg, J., & Egbert, N. (2011). Online impression management: Personality traits and concerns for secondary goals as predictors of self-presentation tactics on Facebook. Journal of ComputerMediated Communication, 17, 1–18. doi:10.1111/ j.1083-6101.2011.01560.x

Chou, H.-T. G., & Edge, N. (2012). "They are happier and having better lives than I am": The impact of using Facebook on perceptions of others' lives. Cyberpsychology, Behavior, and Social Networking, 15, 117–121. doi:10.1089/cyber.2011.0324

Social media use can be positive for mental health and well-being.(2020,28mei).News. https://www.hsph.harvard.edu/news/features/social-media-positive-mental-health/#:~:text=Social%20media%20may%20provide%20individuals,in%2Dperson%20networks%20and%20interactions.

Anderson, A., Huttenlocher, D. P., Kleinberg, J., & Leskovec, J. (2013). Steering user behavior with badges. In The Web Conference. https://doi.org/10.1145/2488388.2488398

McDaniel, R., & Fanfarelli, J. R. (2016). Building Better Digital Badges. Simulation & Gaming, 47(1), 73–102. https://doi.org/10.1177/1046878115627138

Finkelstein, J., Knight, E., & Manning, S. (2013). The Potential and Value of Using Digital Badges for Adult Learners. AIR.

Vreeman, B. (2023). A New Approach to Reducing the Negative Effects of Social Media on The Well-Being: Profile Badges. Utwente.

Watson, D. I., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. Journal of Personality and Social Psychology, 54(6), 1063–1070. https://doi.org/10.1037/0022-3514.54.6.1063

Baldwin Tigges, B. (z.d.). Psychometric Properties of the Social Comparison Motives Scale. PMC. Geraadpleegd op 5 juni 2013, van https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3673696/#:~:text=The%20Iowa%E2%80%93Netherlands%20Comparison%20Orientation%20Measure%20(INCOM),to%205%20(agree%20strongly).

Vogel, E. R., Rose, J. P., Okdie, B. M., Eckles, K., & Franz, B. (2015). Who compares and despairs? The effect of social comparison orientation on social media use and its outcomes. Personality and Individual Differences, 86, 249–256. https://doi.org/10.1016/j.paid.2015.06.026

Yang, C. (2016). Instagram Use, Loneliness, and Social Comparison Orientation: Interact and Browse on Social Media, But Don't Compare. Cyberpsychology, Behavior, and Social Networking, 19(12), 703–708. https://doi.org/10.1089/cyber.2016.0201

Lewallen, J., & Behm-Morawitz, E. (2016). Pinterest or Thinterest?: Social Comparison and Body Image on Social Media. Social media and society, 2(1), 205630511664055. https://doi.org/10.1177/2056305116640559

Thompson, S. H. (2012, 1 maart). Frazzled by Facebook? An exploratory study of gender differences in social network communication among undergraduate men and women. Document - Gale Academic OneFile. https://go.gale.com/ps/i.do?id=GALE%7CA285532023&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=01463934&p=AONE&sw=w&userGroupName=anon%7E39d56cc4

Shepherd, R. P. (2016). Men, women, and Web 2.0 writing: Gender difference in Facebook composing. Computers and Composition, 39, 14–26. https://doi.org/10.1016/j.compcom.2015.11.002

Kimbrough, A. M., Guadagno, R. E., Muscanell, N. L., & Dill, J. (2013). Gender differences in mediated communication: Women connect more than do men. Computers in Human Behavior, 29(3), 896–900. https://doi.org/10.1016/j.chb.2012.12.005

Jackson, L. A., Ervin, K. A., Gardner, P. D., & Schmitt, N. (2001). Gender and the Internet: Women Communicating and Men Searching. Sex Roles, 44(5/6), 363–379. https://doi.org/10.1023/a:1010937901821

Szell, M., & Thurner, S. (2013). How women organize social networks different from men. Scientific Reports, 3(1). https://doi.org/10.1038/srep01214

Mosseri, A. (2023, mei). Instagram Ranking Explained. about.instagram.com. https://about.instagram.com/blog/announcements/instagram-ranking-explained

Ostir, G., Smith, P. M., Smith, D., & Ottenbacher, K. J. (2005). Reliability of the Positive and Negative Affect Schedule (PANAS) in medical rehabilitation. Clinical Rehabilitation (19), pp. 767-769.

Engelen, U., De Peuter, S., Voctoir, A., Van Dienst, I., & Van den Bergh, O. (2006). Verder validering van de Positive en Negative Affect Schedule (PANAS) en vergelijkking van twee Nederlandstalige versies. Gedrag & Gezondheid , 34 (2), pp. 89-102.

Canva. Retrieved from https://www.canva.com/

Skaik, Y. (2015). The bread and butter of statistical analysis "t-test": Uses and misuses. Pakistan Journal of Medical Sciences, 31(6). https://doi.org/10.12669/pjms.316.8984

Reer, F., Tang, W. K., & Quandt, T. (2019). Psychosocial well-being and social media engagement: The mediating roles of social comparison orientation and fear of missing out. New Media & Society, 21(7), 1486–1505. https://doi.org/10.1177/1461444818823719

Robinson, A. C., Bonnette, A., Howard, K., Ceballos, N. A., Dailey, S. L., Lu, Y., & Grimes, T. (2019). Social comparisons, social media addiction, and social interaction: An examination of specific social media behaviors related to major depressive disorder in a millennial population. Journal of Applied Biobehavioral Research, 24(1), e12158. https://doi.org/10.1111/jabr.12158

Wang, J., Wang, H., Gaskin, J., & Hawk, S. T. (2017). The Mediating Roles of Upward Social Comparison and Self-esteem and the Moderating Role of Social Comparison Orientation in the Association between Social Networking Site Usage and Subjective Well-Being. Frontiers in Psychology, 8. https://doi.org/10.3389/fpsyg.2017.00771

Grant, S. (2014). Badges: show what you know. researchgate.net. https://www.researchgate.net/profile/SherylGrant/publication/3 14175685_Badges_Show_What_You_Know/links/58b8694092 851c471d4a407d/Badges-Show-What-You-Know.pdf

Clipchamp. Retrieved from https://clipchamp.com/