Analysis Report

This report is structured as follows.

Contents

This analysis focused on the construction of a scale for self-esteem, a statistical comparison of self-esteem levels across sociodemographic factors and the analysis of relationships between self-esteem and exposure to discriminatory content in social media.

Frequency Tables

In examining the frequency distribution of participants categorized by gender, education level, and occupation, the data reveals distinct patterns. Within the gender category, a predominant majority of participants identified as female (76%), followed by males (16%), with minimal representation from non-binary/third gender individuals (2%) and a small percentage of non-responses (6%). This distribution indicates a significant gender imbalance within the sample.

Regarding education level, the majority of respondents reported having a 4-year degree (38%), with 'some college' as the next most common response (26%). This suggests that the sample largely consists of individuals with some form of higher education. Notably, professional degrees and 2-year degrees accounted for 14% and 10% of the sample, respectively, while high school graduates constituted the smallest group among those who provided a response (6%). Non-responses in this category also accounted for 6%, reflecting a minor proportion of the participants.

Occupationally, the data skews heavily towards individuals employed full-time, representing 58% of the sample. This is contrasted with part-time employees and students, each making up 16%, and a smaller fraction categorized under 'other' (4%). Non-responses in the occupation category mirrored those in gender and education, making up 6% of the sample.

Category	Level	Count	%
Gender	Non Response	3	6
	Female	38	76
	Male	8	16
	Non-binary / third gender	1	2
Education Level	Non Response	3	6
	2 year degree	5	10
	4 year degree	19	38
	High school graduate	3	6
	Professional degree	7	14
	Some college	13	26
Occupation Selected Choice	Non Response	3	6
	Employed (full-time)	29	58
	Employed (part-time)	8	16
	Other (please specify)	2	4
	Student	8	16

The analysis of social media usage patterns reveals significant skewness towards specific behaviors across platforms. Instagram usage notably skews towards frequent engagement, with 56% of respondents using it multiple times a day, contrasting sharply with the more varied usage patterns of other platforms. For Reddit, a substantial 46% of participants report not using the platform at all, highlighting a distinct lack of engagement compared to Instagram's high usage rates. Similarly, Tumblr exhibits a pronounced disinterest among the sample, with 70% of respondents not using it at all, the highest among all platforms surveyed for non-usage. These patterns suggest a clear preference and aversion among participants towards certain social media platforms, with Instagram standing out for its high daily engagement, while Reddit and Tumblr are characterized by a significant portion of the sample abstaining from use.

Category	Level	Count	%
Facebook Usage	Non Response	12	24
	A few times a week	4	8
	At least once a day	6	12
	At least once a week	1	2
	Less than weekly	9	18
	Multiple times a day	7	14
	Not at all	11	22
Instagram Usage	Non Response	12	24
	A few times a week	2	4
	At least once a day	4	8
	At least once a week	1	2
	Less than weekly	1	2
	Multiple times a day	28	56
	Not at all	2	4
X Twitter or X Usage	Non Response	12	24
	A few times a week	3	6
	At least once a day	5	10
	At least once a week	3	6
	Less than weekly	4	8
	Multiple times a day	8	16
	Not at all	15	30
TikTok Usage	Non Response	12	24
	A few times a week	8	16
	At least once a day	2	4
	At least once a week	1	2
	Less than weekly	4	8
	Multiple times a day	13	26
	Not at all	10	20
Snapchat Usage	Non Response	12	24
	A few times a week	6	12

Category	Level	Count	%
	At least once a day	6	12
	At least once a week	1	2
	Less than weekly	4	8
	Multiple times a day	10	20
	Not at all	11	22
	Non Response	13	26
	A few times a week	9	18
	At least once a day	3	6
YouTube Usage	At least once a week	3	6
	Less than weekly	5	10
	Multiple times a day	11	22
	Not at all	6	12
	Non Response	12	24
Tumblr Usage	Less than weekly	2	4
	Multiple times a day	1	2
	Not at all	35	70
	Non Response	12	24
	A few times a week	2	4
Reddit Usage	At least once a week	4	8
	Less than weekly	6	12
	Multiple times a day	3	6
	Not at all	23	46
	Non Response	17	34
Other please specify	Less than weekly	1	2
	Multiple times a day	2	4
	Not at all	30	60

The last descriptive table presents data on individuals' experiences with discriminatory content on social media platforms, focusing on their reactions, perceptions of platform moderation, and the psychological impacts. Notably, 40% of respondents have never reported discriminatory content to platform administrators, with a significant 32% confirming they have done so. The willingness to intervene by unfollowing or blocking accounts that post discriminatory content is high, with 54% of individuals taking such action, indicating a proactive stance against online discrimination.

However, confidence in social media platforms' effectiveness in addressing and moderating discriminatory content is mixed. A majority (34%) feel platforms are only somewhat effective, with 26% outright stating platforms are not effective, reflecting skepticism towards these platforms' moderation efforts.

Engagement in online discussions or activism against discriminatory content is limited; 54% of respondents have not participated, with a small fraction (8%) affirming their involvement. This suggests a hesitance or lack of interest in online activism among the majority.

Perceptions of the impact of discussions or activism are also varied. While 30% find them moderately helpful or empowering, a substantial 32% did not respond, and 24% feel these efforts are only slightly helpful. This indicates a moderate belief in the effectiveness of such discussions or activism in combating online discrimination.

Awareness and manipulation of social media algorithms to control content exposure show a spread across different levels of awareness, with 24% very aware and 18% not aware at all. Comfort levels in discussing the impact of discriminatory content with peers or mental health professionals reveal a diverse range of comfort, with 28% very comfortable discussing it with peers and 24% very comfortable discussing it with professionals.

Category	Level	Count	%
Have you ever reported discriminatory content on social media platforms to platform administrators	Non Response	14	28
	No	20	40
	Yes	16	32
Have you ever unfollowed or blocked individuals or accounts on social media due to the presence of discriminatory content in their posts	Non Response	14	28
	No	3	6
	Sometimes	6	12
	Yes	27	54
Do you believe that social media platforms effectively address and moderate discriminatory content	Non Response	13	26
	No	13	26
	Not sure	3	6
	Somewhat	17	34
	Yes	4	8
Have you ever participated in online discussions or activism related to combating discriminatory content	Non Response	14	28
	Considering it	5	10
	No	27	54
	Yes	4	8
To what degree do you believe these discussions or acts of activism have been helpful or empowering	Non Response	16	32
	Extremely helpful or empowering: The discussions or acts of activism have been exceptionally helpful or empowering.	1	2
	Moderately helpful or empowering: The discussions or acts of activism have provided a moderate level of help or empowerment.	15	30
	Not at all helpful or empowering: The discussions or acts of activism have not been helpful or empowering at all.	4	8
	Slightly helpful or empowering: The discussions or acts of activism have been minimally helpful or empowering.	12	24

Category	Level	Count	%
	Very helpful or empowering: The discussions or acts of activism have been significantly helpful or empowering.	2	4
How aware are you of the ability to modify the algorithms that determine the content shown to you on social media platforms	Non Response	14	28
	Moderately aware: I have a moderate level of awareness regarding the ability to change algorithms on social media platforms.	9	18
	Not aware at all: I have little to no awareness of the ability to change the algorithms that determine content on social media platforms.	9	18
	Slightly aware: I have minimal awareness of the ability to change the algorithms on social media platforms.	6	12
	Very aware: I am well-informed about the ability to change the algorithms on social media platforms.	12	24
How comfortable do you feel discussing the impact of discriminatory content on social media with your peers or support networks	Non Response	18	36
	Moderately comfortable: I feel neutral or moderately comfortable discussing the impact of discriminatory content on social media with my peers or support networks.	8	16
	Not comfortable at all: I feel extremely uncomfortable discussing the impact of discriminatory content on social media with my peers or support networks.	4	8
	Slightly comfortable: I feel somewhat uncomfortable discussing the impact of discriminatory content on social media with my peers or support networks.	6	12
	Very comfortable: I feel quite comfortable discussing the impact of discriminatory content on social media with my peers or support networks.	14	28
How comfortable would you be discussing the impact of social media and discriminatory content with a therapist or mental health professional	Non Response	18	36
	Neutral: I would feel neutral about discussing the impact of social media and discriminatory content with a therapist or mental health professional.	12	24
	Somewhat comfortable: I would feel somewhat comfortable discussing the impact of social media and discriminatory content with a therapist or mental health professional.	2	4
	Somewhat uncomfortable: I would feel somewhat uncomfortable discussing the impact of social media and discriminatory content with a therapist or mental health professional.	3	6
	Very comfortable: I would feel very comfortable discussing the impact of social media and discriminatory content with a therapist or mental health professional.	12	24
	Very uncomfortable: I would feel very uncomfortable discussing the impact of social media and discriminatory content with a therapist or mental health professional.	3	6

Category	Level	Count	%
To what extent are you inclined to seek support or engage with therapists specializing in mental health and self esteem for individuals impacted by discriminatory content	Non Response	18	36
	Moderately likely: I am moderately inclined to seek support or engage with therapists specializing in mental health and self-esteem for individuals affected by discriminatory content.	8	16
	Not likely at all: I am not inclined to seek support or engage with therapists specializing in mental health and self-esteem for individuals affected by discriminatory content.	7	14
	Slightly likely: I have a minimal inclination to seek support or engage with such therapists.	9	18
	Very likely: I am highly inclined to seek support or engage with therapists specializing in mental health and self-esteem for individuals affected by discriminatory content.	8	16
How effective do you find your current coping mechanisms in managing the emotional toll of discriminatory content on social media	Non Response	19	38
	Moderately effective: My current coping mechanisms are moderately effective in managing the emotional toll.	12	24
	Not effective at all: My current coping mechanisms are not effective in managing the emotional toll of discriminatory content on social media.	4	8
	Slightly effective: My current coping mechanisms are minimally effective in managing the emotional toll.	6	12
	Very effective: My current coping mechanisms are highly effective in managing the emotional toll.	9	18

Reliability Analysis

This section presents the results of the construction of the Self-Esteem scale. In the context of reliability analysis for a scale measuring self-esteem, item-total correlation (ITC) and Cronbach's alpha are two critical measures. Item-total correlation assesses the relationship between each item's score and the total score of the remaining items on the scale, indicating how well each item correlates with the overall scale's construct. A higher ITC value suggests that the item closely aligns with the overall construct measured by the scale. Cronbach's alpha, on the other hand, evaluates the internal consistency of the scale, or how closely related a set of items are as a group. An alpha value above 0.7 is generally considered acceptable, indicating good internal consistency.

The reliability analysis presented here encompasses various statements related to self-esteem, each assessed for mean score, standard error of mean (SEM), standard deviation (SD), and item-total correlation (ITC). The statements "I certainly feel useless at times" and "I take a positive attitude toward myself" show the highest item-total correlations (0.764 and 0.748, respectively), suggesting these items are strongly related to the overall construct of self-esteem measured by the scale. The statement "I feel that I have a number of good qualities" demonstrates the lowest item-total correlation (0.385), indicating it might be less aligned with the scale's overall construct compared to other items.

The overall scale, with a summed score ranging from 10 to 50, has a mean of 39.350, a standard deviation of 6.927, and a Cronbach's alpha of 0.797. This alpha value underscores the scale's good internal consistency, implying that the items collectively provide a reliable measure of self-esteem. This analysis provides valuable insight into the scale's effectiveness in measuring the construct of self-esteem, indicating a well-constructed scale that effectively captures the nuances of self-perception among individuals.

Variable	Mean	SEM	SD	ITC	Alpha
On a whole I am satisfied with myself	3.732	0.182	1.162	0.556	
At times I think I am no good at all	3.463	0.235	1.502	0.663	
I feel that I have a number of good qualities	4.390	0.160	1.022	0.385	
I am able to do things as well as most other people	4.415	0.144	0.921	0.478	
I feel I do not have much to be proud of	3.805	0.219	1.400	0.603	
I certainly feel useless at times	3.537	0.218	1.398	0.764	
I feel that I am a person of worth	4.463	0.131	0.840	0.649	
I wish I could have more respect for myself	3.049	0.234	1.499	0.561	
All in all I am inclined to think that I am a failure	4.195	0.165	1.054	0.682	
I take a positive attitude toward myself	4.049	0.126	0.805	0.748	
Self-Esteem	39.350	1.095	6.927		0.797

Descriptive Analysis

The table below shows the mean, standard errors, standard deviations and values for skewness and kurtosis for all continuous variables of the study. They were recoded to a 1-5 scale.

Variable	Mean	SEM	SD	Skewness	Kurtosis
Age	27.571	1.147	7.435	1.837	7.098
Frequency of Discriminatory Content Facebook	2.222	0.229	1.376	0.796	2.436
Frequency of Discriminatory Content Instagram	2.750	0.188	1.131	-0.098	2.395
Frequency of Discriminatory Content Twitter or X	2.139	0.226	1.355	0.862	2.441
Frequency of Discriminatory Content TikTok	2.167	0.213	1.276	0.939	2.832
Frequency of Discriminatory Content YouTube	1.861	0.192	1.150	1.302	3.956
Frequency of Discriminatory Content Snapchat	1.194	0.078	0.467	2.353	7.882
Frequency of Discriminatory Content YouTube 1	1.829	0.190	1.124	1.098	3.189
Frequency of Discriminatory Content Other please specify	1.333	0.185	0.961	3.005	10.875
Type of Discriminatory Content Negative media depictions and representations of African Americans	2.946	0.197	1.201	-0.188	2.481
Type of Discriminatory Content Stereotypical depictions and representations of African Americans	3.444	0.201	1.206	-0.612	2.698
Type of Discriminatory Content Rhetoric from public figures and politicians targeting African Americans	2.703	0.205	1.244	0.054	2.115
Type of Discriminatory Content Presence of online hate groups or figures targeting African Americans	2.216	0.190	1.158	0.659	2.747
Type of Discriminatory Content Images and videos depicting brutal attacks targeting African Americans	2.649	0.220	1.338	0.100	1.789
Type of Discriminatory Content Other please specify	1.458	0.217	1.062	2.333	7.327
Viewing discriminatory content on social media negatively affects my mood	3.500	0.213	1.310	-0.841	2.652
Viewing discriminatory content on social media creates a lot of anxiety and distress in me	3.053	0.238	1.469	-0.195	1.640
Viewing discriminatory content on social media can affect how I feel for the rest of the day	3.000	0.220	1.356	-0.330	1.841
Viewing discriminatory content on social media negatively affects how I feel about myself	2.216	0.202	1.228	0.402	1.882
Viewing discriminatory content on social media negatively affects how I think others in the real world think about me	2.816	0.232	1.430	-0.009	1.676
Viewing discriminatory content on social media negatively affects how I think about my self worth	2.105	0.192	1.181	0.594	2.193
Self-Esteem_Sum	39.350	1.095	6.927	-0.479	3.075

The mean age of participants is 27.571 years, suggesting a predominantly young adult cohort. The frequency of encountering discriminatory content on various social media platforms shows variability, with Instagram reporting a higher mean frequency of 2.750, indicating that users on this platform might experience discriminatory content more frequently compared to other platforms such as Snapchat, which has the lowest mean frequency of 1.194.

In terms of the types of discriminatory content encountered, the mean scores reveal that stereotypical depictions and representations of African Americans have the highest reported frequency (mean = 3.444), suggesting that this form of discriminatory content is more commonly perceived by respondents. Conversely, discriminatory content categorized as "Other, please specify" has a lower mean frequency (1.458), indicating such types of content are less frequently encountered.

The impact of viewing discriminatory content on social media on individuals' psychological states is also notable. Respondents report a significant negative effect on mood (mean = 3.500), indicating a high level of emotional disturbance following exposure to discriminatory content. This is further corroborated by reports of anxiety and distress (mean = 3.053), and the potential for such content to affect respondents' feelings throughout the day (mean = 3.000). Interestingly, the mean score for how discriminatory content negatively affects self-perception is lower (2.216), suggesting a varying impact on self-esteem across individuals.

Finally, the overall self-esteem score has a mean of 39.350, situated in the higher spectrum of the scale, which could indicate a general sense of positive self-worth among respondents despite the negative impacts of discriminatory content encountered on social media.

The table below shows the frequency of participants by age group and groups of self-esteem. Participants with 17 and 30 were categorized as having moderate self-esteem, while those with values higher than 30 were categorized as having high self-esteem.

Category	Level	Count	Percentage
Age	19-25	27	64.3
	25+	15	35.7
Self-Esteem	Moderate Self-Esteem	4	10.0
	High Self-Esteem	36	90.0

The analysis of self-esteem scores across different demographic categories, including gender, age, education level, and occupation, reveals variations in mean scores and standard deviations, indicating diverse self-perceptions among these groups. Notably, non-binary/third gender individuals report the highest self-esteem mean score (42.0), although the standard deviation is not applicable (NA), suggesting limited variability data or a small sample size for this group. Among age categories, individuals aged 25 and above have higher self-esteem (40.1) compared to those in the 19-25 age group (38.7). This could imply that self-esteem increases with age, potentially due to greater life experiences or stability.

In terms of education, those with a professional degree exhibit the highest self-esteem mean score (44.2), with high school graduates having the lowest (31.3), indicating that higher educational attainment may be associated with higher self-esteem. Occupation-wise, the "Other (please specify)" category reports the highest mean self-esteem score (45.5), with part-time employees scoring the lowest (35.3), suggesting that the nature of one's occupation can significantly impact self-esteem.

	Self-Esteem	
	Mean	SD
Gender Female	39.7	6.2
Gender Male	37.6	10.4
Gender Non-binary / third gender	42.0	NA
Age 25+	40.1	9.2
Age 19-25	38.7	5.6
Education Level 4 year degree	39.2	6.4
Education Level 2 year degree	38.5	8.3
Education Level High school graduate	31.3	10.0
Education Level Professional degree	44.2	6.6
Education Level Some college	39.9	5.5
Occupation Selected Choice Student	38.0	6.0
Occupation Selected Choice Employed (full-time)	40.2	7.5
Occupation Selected Choice Employed (part-time)	35.3	3.8
Occupation Selected Choice Other (please specify)	45.5	3.5

One-way ANOVA

The one-way ANOVA results, including Levene's test for equality of variances and the ANOVA test for differences among group means, provide a statistical basis for understanding these variations. Levene's test results show p-values greater than 0.05 for all factors (gender, categorized age, education level, occupation), indicating no significant difference in variance across the groups for the self-esteem scores, allowing for the reliability of the subsequent ANOVA results.

Factor	F_Value	DF1	DF2	P_Value
Gender	2.000	2	37	0.150
categorized_Age	1.905	1	34	0.177
Education Level	0.185	4	35	0.945
Occupation Selected Choice	1.071	3	36	0.374

The ANOVA results reveal non-significant p-values for all factors (gender: p = 0.726, categorized age: p = 0.589, education level: p = 0.154, occupation: p = 0.206), suggesting that the mean differences in self-esteem scores across gender, age categories, education levels, and occupation types are not statistically significant. These findings suggest that, despite observable differences in mean

self-esteem scores among the various groups, these differences do not reach statistical significance, indicating that factors such as gender, age, education level, and occupation alone may not be strong predictors of self-esteem levels within this sample.

Effect	Sum_Sq	Mean_Sq	Df	FValue	pValue
Gender	32.167	16.083	2	0.324	0.726
categorized_Age	14.864	14.864	1	0.297	0.589
Education Level	317.254	79.313	4	1.787	0.154
Occupation Selected Choice	220.556	73.519	3	1.604	0.206

<u>**Correlation Analysis**</u>

Spearman's correlation was used to identify significant associations between self-esteem and the frequency of discriminatory content across various platforms. The results are presented below.

Index	Self-Esteem
Frequency of Discriminatory Content Facebook	-0.075
Frequency of Discriminatory Content Instagram	-0.094
Frequency of Discriminatory Content Twitter or X	0.104
Frequency of Discriminatory Content TikTok	0.162
Frequency of Discriminatory Content YouTube	-0.222
Frequency of Discriminatory Content Snapchat	0.144
Frequency of Discriminatory Content YouTube 1	-0.181
Frequency of Discriminatory Content Other please specify	-0.232

All coefficients were relatively small and non-significant ($p > 0.05$). The lack of significant correlations between the frequency of encountering discriminatory content on various social media platforms and self-esteem scores suggests that within the examined sample, the relationship between these two variables is not statistically robust. Despite the observed correlations, both positive and negative, their magnitudes are small, and without statistical significance, it indicates that there might not be a direct or straightforward impact of discriminatory content exposure on social media on an individual's self-esteem.

An additional correlation was calculated using a summed index of discriminatory content exposure (the sum of all platforms). The Pearson's correlation coefficient was -0.131 and non-significant too.

Regression Analysis

Lastly, the effect of the exposure to discriminatory content on self-esteem whilst controlling for sociodemographic factors was evaluated using Ordinary Least Squares regression. The results are below.

term	estimate	std.error	statistic	p.value
(Intercept)	34.035	6.306	5.398	0.000
ExposureToDiscContent_Sum	0.087	0.292	0.299	0.768
Gender Male	-10.234	5.060	-2.023	0.057
Gender Non-binary / third gender	1.283	6.885	0.186	0.854
Age 25+	1.290	3.119	0.414	0.684
Education Level 4 year degree	5.111	4.266	1.198	0.246
Education Level High school graduate	-2.213	7.113	-0.311	0.759
Education Level Professional degree	10.721	5.376	1.994	0.061
Education Level Some college	2.959	4.791	0.618	0.544
Occupation Employed (part-time)	-3.435	3.335	-1.030	0.316
Occupation Other (please specify)	12.270	5.808	2.112	0.048
Occupation Student	-1.412	4.382	-0.322	0.751

The coefficient for exposure to discriminatory content (0.087) with a p-value of 0.768 suggests that the overall exposure to discriminatory content does not significantly impact self-esteem within this model, indicating that the variation in self-esteem scores cannot be directly attributed to the level of exposure to discriminatory content alone.

Among the sociodemographic variables, gender presents noteworthy findings. Males show a negative association with self-esteem (estimate = -10.234) with a p-value close to significance (0.057), suggesting that males might have lower self-esteem compared to females, although this result is marginally outside the conventional significance level. The category for non-binary/third gender individuals shows a positive estimate (1.283) but with a high p-value (0.854), indicating no significant effect on self-esteem compared to the baseline gender category.

Age, represented by the "Age 25+" variable, shows a small positive estimate (1.290) with a non-significant p-value (0.684), suggesting that being older than 25 does not significantly affect self-esteem levels in this sample.

Educational attainment reveals mixed effects. Individuals with a professional degree show a positive estimate towards self-esteem (10.721) with a p-value of 0.061, indicating a trend towards higher self-esteem that approaches significance. Other education levels, including a 4-year degree and some college, also show positive estimates but with non-significant p-values, suggesting no clear pattern of education level influencing self-esteem within the confines of this analysis.

Occupationally, the "Other (please specify)" category is positively associated with self-esteem (estimate = 12.270) and reaches statistical significance (p-value = 0.048), indicating that individuals in this category tend to report higher self-esteem. Conversely, part-time employment is associated with a negative effect on self-esteem (estimate = -3.435), though this result is not statistically significant (p-value = 0.316).