



**Utrecht University**

**Digital Allyship: Promoting Inclusion in Academia through an Allyship-Based Video  
Intervention**

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### **Abstract**

In the context of increasing diversity in higher education, students from minority groups often face challenges that negatively affect their sense of inclusion and belonging within the university community. This study explores the impact of allyship-based video interventions in enhancing feelings of inclusion in a diverse group of university students ( $N = 63$ ). A between-subjects design was employed to compare the effects of an allyship-based video against a control condition video focusing on general campus friendships. The analyses show that students exposed to the allyship video reported significantly higher feelings of inclusion compared to those who viewed the control video, with effects being more pronounced among non-white participants. Additionally, the analyses found no significant moderating effects of socioeconomic background and perceived message credibility. The findings support claims about the effectiveness of digital video interventions and the positive impact of allyship. Despite acknowledging some limitations, it is concluded that the present study contributes to the broader discourse on diversity and inclusion by highlighting the value of allyship-based video interventions in promoting inclusivity in academia.

*Keywords:* allyship, campus diversity, minority students, video intervention, quantitative research

## **Digital Allyship: Promoting Inclusion in Academia through an Allyship-Based Video Intervention**

In the increasingly diverse landscape of higher education, students from ethnic minorities and low socioeconomic backgrounds often face serious challenges that hinder their sense of inclusion and academic success (Basit & Modood, 2016). These challenges stem from structural imbalances and social biases which lead to feelings of marginalisation and alienation among minority group students (Bunce et al., 2019; Harackiewicz et al., 2016). The present study aims to contribute to a growing body of research that investigates how to enhance inclusivity in the university environment. Specifically, this thesis proposes a modern approach of using digital video interventions discussing the concept of “allyship” behaviours to enhance feelings of inclusion, especially among minority group students.

One of the primary groups that are particularly affected by the aforementioned challenges are People of Colour (PoC), or “non-white”, students. In the setting of higher education, non-white students often face challenges that can lead to feelings of exclusion and hinder their academic performance as well as overall experience as students. These challenges stem from multiple factors, such as systemic inequalities, racial biases, and cultural insensitivities (Bunce et al., 2019; Harper & Hurtado, 2007). PoC students may experience stereotyping, discrimination and microaggressions from their peers and faculty members on campus, which can create an unwelcoming, hostile and isolating environment (Bunce et al., 2019). For instance, an interview study by Hillen and Levy (2015) in Scotland found that non-white students had experiences such as being laughed at for their pronunciation and being excluded from group work. Moreover, the underrepresentation of PoC in teaching and leadership positions on campus contributes to non-white students’ feelings of marginalisation and alienation, hindering their sense of belonging and identity affirmation within the university community (Harper & Hurtado, 2007).

Besides ethnicity, students’ feelings of inclusion and belonging are also related to social class. Low socioeconomic status (SES) students, like non-white students, are often underrepresented in higher education and can also be considered a minority within the university population (Alon, 2009; Jury et al., 2017). This group also faces challenges concerning feelings of inclusion and belonging. For instance, low-SES students often struggle with their own identity while they transition to the university environment and get acquainted with its culture (Jetten et al., 2007). This struggle is considered an “out-of-field” experience for low SES students who feel detached and isolated from a high SES environment such as the university (Reay et al., 2009). Furthermore, due to the limited representation, low-SES

students are constantly reminded of their minority status and differences from other students (Martin, 2015). The lack of institutional awareness of their unique challenges additionally reinforces a sense of invisibility among low SES students (Jury et al., 2017). Consequently, low-SES students frequently state that they feel like they do not belong and fit in the higher education environment (Harackiewicz et al., 2016; Rubin, 2012; Soria & Stebleton, 2013). Hence, addressing the challenges faced by students from diverse backgrounds is crucial for fostering a more inclusive and supportive higher education environment.

To address the challenges faced by students from ethnic minorities and low-SES backgrounds, universities have implemented various interventions. While diversity training workshops aim to increase awareness and promote inclusive behaviours, they have limitations in producing long-term behavioural change or addressing deeper systemic issues (McCauley et al., 2000; Dobbin & Kalev, 2018; Noon, 2017). Despite these critiques, many universities continue to invest in diversity training as part of their broader efforts to promote a more inclusive campus climate.

According to Muraki et al. (2024), a more recent approach that universities take to enhance feelings of inclusion and belonging involves the Affinity and Allyship (A&A) group model. These groups aim to create supportive environments where the marginalised university community can exchange their identity experiences. Affinity groups focus on building solidarity and safety, while allyship groups offer opportunities for students from majority groups to learn about allyship behaviours (Muraki et al., 2024).

In the modern discourse about diversity and inclusion, the concept of “allyship” and being an “ally” has interestingly become an essential part of the rhetoric for promoting solidarity and support for individuals from different social groups. Allyship has been shown to increase feelings of inclusion among marginalised communities (Li et al., 2020). It entails actively advocating for and standing in solidarity with these groups, often by using one's privilege to challenge systemic injustices (Radke et al., 2020). According to Ashburn-Nardo (2015), “allies” are considered members of privileged groups who uphold principles of equality and support non-privileged groups. For example, white people would have raised their voices to support black citizens during the Black Lives Matter movement. Allies are also considered essential in positively affecting the higher education environment by establishing inclusivity and positive social change (LeMaire et al., 2020). Thus, contemporary efforts by universities to address inclusion may rely even more on using allyship-based practices.

However, it is important to consider the credibility of allyship messages, as not all forms of allyship behaviour have positive effects. In light of the rise of digital activism over

the last decade, there has been an increasing recognition of “performative allyship”. This refers to an inauthentic form of allyship, which involves individuals publicly aligning themselves with marginalised groups for personal gain or to maintain a positive image, without actively engaging in meaningful actions by addressing systemic issues (Kutlaca & Radke, 2022). Performative allyship behaviours often lack a genuine commitment to social justice and may serve to reinforce existing power dynamics rather than challenge them. Inauthentic allyship messages may, for instance, manifest in superficial gestures of support or symbolic actions that do not result in tangible change or address underlying inequalities (Kalina, 2020). According to Kalina (2020), privileged individuals who demonstrate performative allyship on social media are often solely motivated by personal incentives, such as being perceived as a “good person”. Moreover, inauthentic allyship behaviour may result in harmful consequences for the psychological well-being of affected minority groups (Kutlaca & Radke, 2022). Hence, it is important to develop authentic messages when creating allyship-based interventions to promote genuine solidarity.

In the current study, the relationship between authentic allyship and feelings of inclusion among a diverse group of students will be investigated through the means of a digital video intervention. During times of digitalisation, online videos have emerged as a common intervention and education method in the 21st century (He et al., 2014). According to Tuong et al. (2012), online videos are considered cost-effective and can have a great impact by reaching wide audiences due to the accessibility of digital media. Furthermore, digital videos have been found to be a popular and effective approach to mental health interventions (Harshbarger et al., 2021; Janoušková et al., 2017; Toh et al., 2022). Concerning inclusion and diversity, another study by Soble et al. (2011) has revealed that video interventions can increase racial awareness among white majority group university students. This suggests that an inclusivity-related video intervention should raise awareness for majority groups while not causing feelings of exclusion, or backfire effects.

Both allyship-based practices and video interventions have respectively been found to be contemporary and effective intervention methods. However, there remains a lack of quantitative empirical research investigating the combination of video interventions with allyship-based messages and their impact on students from diverse backgrounds in the higher education context. Through a between-subjects design, this study therefore sets out to investigate the impact of an allyship-based video intervention on feelings of inclusion among a diverse set of higher education students, including both minority- and majority groups. Consequently, the research question has been formulated as: “How do allyship-based video

interventions impact feelings of inclusion among university students from diverse backgrounds?”

Building upon the insights from the literature review, the study proposes four hypotheses. The first three predictions are based on the theory that allyship messages can establish inclusivity in the higher education setting and that allyship behaviour specifically resonates with marginalised groups (LeMaire et al., 2020; Radke et al., 2020). The hypotheses are as follows: (1) students who watch an allyship-based video intervention will report higher feelings of inclusion than students who do not watch an allyship-based video intervention, (2) the effect of watching an allyship-based video intervention is moderated by ethnicity such that the effect will be stronger for non-white students than for white students, (3) the effect of watching an allyship-based video intervention is moderated by socioeconomic background such that the effect will be stronger for students with a relatively low socioeconomic background than for students with a relatively higher socioeconomic background. The fourth hypothesis is based on the aforementioned finding from Kalina (2020) who emphasised that inauthentic allyship does not facilitate meaningful change, proposing that (4) the effect of watching an allyship-based video intervention on feelings of inclusion is moderated by the perceived credibility of the message such that students who rate the allyship video as highly credible will report higher feelings of inclusion.

### **Methods**

This study received approval from the Ethics Review Board of the Faculty of Social & Behavioural Sciences at Utrecht University on March 28th, 2024 (UU-SER approval number: 24-0441). The data collection took place in April and May 2024.

### **Design and Participants**

A cross-sectional quantitative study was conducted to investigate the impact of allyship-based digital video interventions on feelings of inclusion among a diverse set of university students. This study utilised a between-subjects design to compare the effects of an experimental condition, where participants viewed an allyship-based video, with a control condition, where participants viewed a video superficially addressing friendship on campus. Additionally, it is important to note that this study was conducted in collaboration with another researcher who measured different variables. However, aspects specific to the other researcher's study that are not relevant to this paper will not be further addressed.

The survey of this study was administered via the online software Qualtrics. Within Qualtrics, participants responded to demographic questions, watched the video manipulation,

and answered a scale regarding their perceived inclusion within the university community and the credibility of the video message.

Participants were recruited using opportunity sampling, and the study was also advertised on the SONA system of Utrecht University. Participants who completed the study via the SONA system received 1 PPU in compensation. The inclusion criteria specified that participants must be students who are enrolled at a higher education institution. To determine the appropriate sample size for achieving sufficient statistical power, a power analysis was conducted before data collection. Using G\*Power, it was determined that a sample size of 68 was needed to achieve a power of .80 at an alpha level of .05, assuming a medium effect size for a regression analysis ( $f^2 = .15$ ).

In total, 88 subjects participated in the study. However, data from 25 participants had to be removed as 21 participants failed the attention check, two participants finished the survey too quickly, and two participants did not complete the survey.

The final sample included a total of 63 higher education students aged between 19 and 26 ( $M = 22.67$ ,  $SD = 1.79$ ). The majority of respondents were female (68.25%) while most of the remaining participants were male (30.16%) and one participant in the data was non-binary. Regarding their ethnicity, 36 participants identified as white and 27 as non-white. Non-white participants included individuals who identified as Mixed ( $n = 7$ ), Black ( $n = 5$ ), Hispanic ( $n = 2$ ), and Arabic ( $n = 2$ ), with the remaining participants reporting other backgrounds and five non-white students not specifying their ethnicity. Participants' socioeconomic backgrounds varied, with scores ranging from 2 to 9 on the 10-point MacArthur Scale of Subjective Social Status (Adler et al., 2000). The average score was 5.83, indicating a tendency towards middle to upper-middle socioeconomic status ( $SD = 2.07$ ).

## **Materials**

All items from the measures of the survey can be found in Appendix A.

### ***Demographic Questionnaire***

Participants provided demographic information such as age and gender identification. Regarding their ethnicity, participants could choose between the two answer options “white” and “non-white” with the opportunity to specify their ethnic background in an open text field. Additionally, the demographic question regarding the participants' socioeconomic background was based on the MacArthur Scale of Subjective Social Status (Adult Version) created by Adler et al. (2000). This question was specifically adapted to capture participants' background and upbringing rather than their current socioeconomic status. Participants were asked to indicate the socioeconomic status they experienced during their upbringing by selecting the

rung on a 10-rung ladder that best represented their perception of their living conditions, with 1 resembling the lowest rung and “worst” socioeconomic background and 10 resembling the highest rung and “best” socioeconomic background while growing up.

### ***Video Manipulation***

The videos were produced with the web application Canva and the video-editing program DaVinci Resolve 17. The link to the videos, as well as the scripts for both video manipulations, along with still images from the visuals, can be found in Appendix B.

**Allyship Video (Experimental Condition).** In the experimental condition, participants were exposed to a 2:49-minute video intervention focused on promoting allyship within the university community. The video featured animations and graphics accompanied by voice-over narration from a female character called "Allie", who is a white university student striving to be an ally. A personal narration style was chosen to enhance relatability and engagement among viewers (Drumm 2013; Gallo, 2019). In the video, Allie first emphasises the importance of supporting marginalised individuals within a diverse higher education community. Afterwards, the narrator also shares a personal anecdote about how she demonstrated allyship behaviours when she interacted with a minority-group student called “Samuel”. The main allyship behaviours that were highlighted in the video were “empathetic listening” and “creating an environment where minority group voices are heard and valued”. The choice for articulating these behaviours was largely inspired by findings from the article “Allyship in the Academy” by LeMaire et al. (2020). The video ends with the narrator, Allie, stressing the importance of establishing an inclusive campus where all students, including those from minority groups, can feel like they belong.

**Friendship Video (Control Condition).** In the control condition, participants were presented with a 2:31-minute video focused on the theme of friendship within the university community. Similar to the experimental condition video, the female narrator, Allie, delivered the voice-over narration. The video also featured similar animations and graphics. However, unlike the allyship video, which delved into specific allyship behaviours, the control condition video superficially addressed the significance of building friendships on campus. In this video, Allie shares a personal anecdote about her interaction with a student named “David” and highlights the importance of forming connections and meaningful relationships at university.

**Attention Check.** Participants were presented with an attention check question to assess their engagement with the content. Specifically, they were asked, "What was the name of the student that Allie talked about in her personal anecdote? Choose the answer that



includes their name." The answer options included different names, with the correct option being "Samuel" for the allyship condition and "David" for the friendship condition. This question served to indeed confirm participants' attentiveness to the narrative presented in the video.

### ***Message Credibility***

To check if the message in the video was perceived as authentic, participants were asked to rate the credibility of the video message delivered by the narrator, Allie. Participants rated Allie's credibility on a 5-point Likert scale, with 1 indicating "Not at all credible" and 5 indicating "Extremely credible."

### ***Perceived Group Inclusion Scale (PGIS)***

The respondents' feelings of inclusion within the university community were measured based on the Perceived Group Inclusion Scale (PGIS) which was developed by Jansen et al. (2014). The scale includes 16 items and demonstrates excellent internal consistency and reliability ( $\alpha = .96$ ). Items were slightly altered in terms of formulation to be more tailored to the university setting. Example items from the scale are: "My university community gives me the feeling that I belong"; "My university community appreciates me"; and "My university community encourages me to express my authentic self." Participants were requested to express their agreement level on a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree".

### ***Affective Responses***

In addition to the primary measures, this study also explored participants' emotional reactions to the video interventions. Thus, participants were prompted to evaluate their affective responses to the video. Specifically, participants were asked in four items to rate the extent to which they found the video inspiring, annoying, engaging, and interesting on a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree".

### ***Procedure***

When accessing the online survey, participants were first introduced to the research purpose and asked to read and acknowledge their understanding of the study details, including confidentiality assurances and the option to withdraw at any time (see Appendix C). Participants were then prompted to provide informed consent. Then, respondents were asked to give relevant demographic information such as gender identification, age, and socioeconomic background.

Next, participants were directed to a page where they read information about the upcoming video. They were advised to envision the narrator, Allie, as a classmate who is

addressing their university environment. Additionally, participants were informed that a follow-up question would check for their comprehension of the video content, ensuring that they would watch it in its entirety. Via randomisation, participants were either directed to the allyship (experimental) condition or the friendship (control) condition. After finishing the video, participants were presented with the aforementioned attention check question and the items regarding their affective responses to the video.

Next, participants were instructed to rate the credibility of the message in the video. Afterwards, participants were instructed to fill out the PGIS. After doing so, respondents had the opportunity to make comments in an open text field about whether something stood out to them while watching the video. On the next and final page of the survey, participants were presented with a debriefing text revealing the study's purpose. At the bottom of the same page, participants were thanked for their participation. After that, the study was completed. The duration of completing the online survey was approximately 15 minutes.

### **Data Analysis**

Data analysis was performed using the statistical software R Studio (Version 2024.04.1+748). Participants who failed the attention check item were removed to ensure the respondents' exposure to the video manipulation ( $N = 21$ ). Additionally, data from subjects who did not complete the survey, or completed it unrealistically fast, was also removed ( $N = 4$ ), leaving a final sample of 63 participants.

First, an independent samples t-test and Mann-Whitney U test were performed to test the first hypothesis by examining the difference in PGIS scores between the two conditions. Additionally, regression analyses were used as the main statistical method to test the remaining moderation hypotheses.

For these analyses, specific variables were recoded. The variable for the video condition was recoded such that the friendship condition was labelled as "0" and the allyship condition was labelled as "1". Similarly, the variable for ethnicity was recoded with "white" participants labelled as "0" and "non-white" participants labelled as "1". Relabelling these variables was essential for the regression analyses to facilitate the interpretation of the interaction and main effects in the moderation models.

### **Results**

This section presents the findings from the data analyses, including the results of hypothesis testing and exploratory testing regarding the affective responses. It is again emphasised that the allyship condition refers to the experimental group and that the friendship condition refers to the control group.

## Hypothesis Testing

### *Hypothesis 1: Impact of Allyship Video Intervention on PGIS*

The initial hypothesis states that students who watch an allyship-based video intervention will report higher feelings of inclusion than students who do not watch an allyship-based video intervention.

Shapiro-Wilk tests were conducted to assess the normality of the distribution of total PGIS scores. For the allyship condition (1), the test was not significant ( $p = .284$ ), suggesting normal distribution. However, for the friendship condition (0), the test was significant ( $p = .030$ ), indicating a deviation from normality. Additionally, Levene's test for equality of variances was conducted to assess whether the variances of PGIS scores were similar between groups. The result was not significant ( $p = .059$ ), assuming equality of variance.

An independent samples t-test was conducted to compare the total scores on the Perceived Group Inclusion Scale for participants who watched the allyship video versus those who watched the friendship video. Participants in the allyship condition scored higher on the PGIS compared to those in the friendship condition, as shown in Table 1. The difference in scores was statistically significant,  $t(61) = -2.65$ ,  $p = .010$ ,  $d = .67$ , thereby supporting the initial hypothesis. Due to the non-normality observed in the friendship condition, an additional Mann-Whitney U test was conducted to check the t-test results. The test confirmed significant differences between the groups ( $U = 320.50$ ,  $p = .016$ ), reinforcing the findings of the t-test and supporting the first hypothesis.

**Table 1**

*Descriptive Statistics of PGIS Scores for Video Conditions*

Video Condition	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Allyship	32	61.25	10.65	37	79
Friendship	31	52.35	15.60	26	80

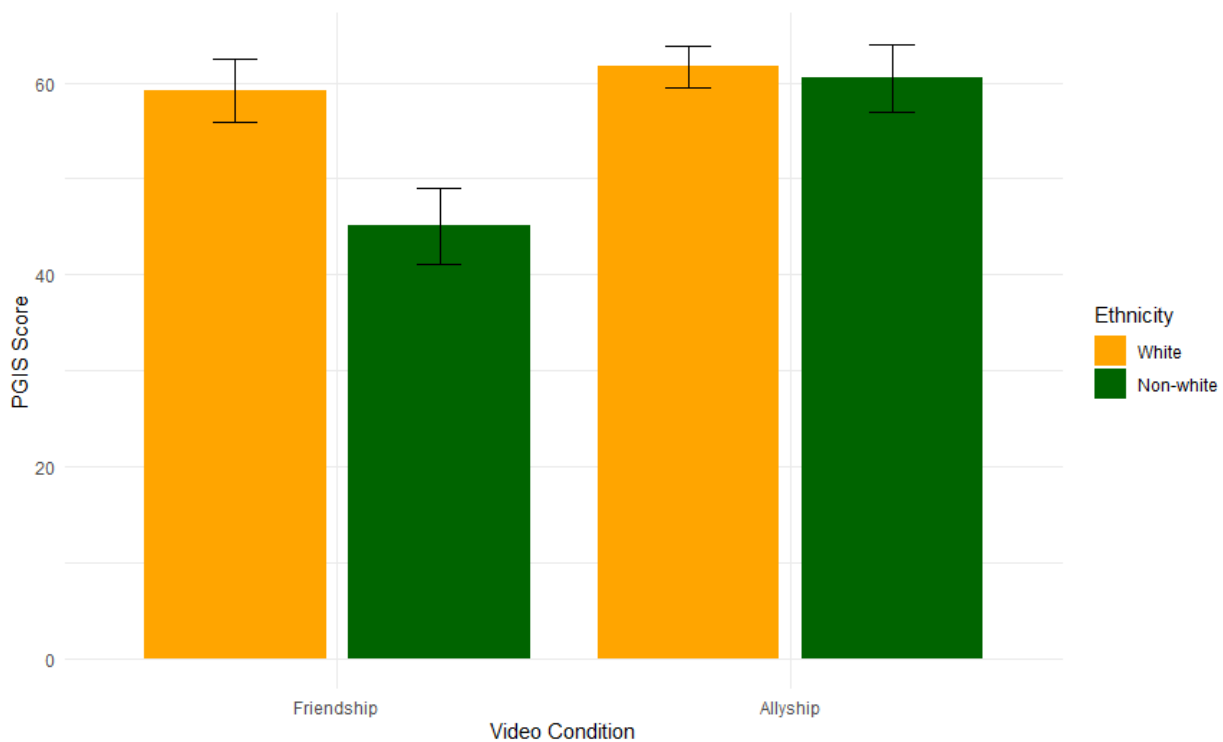
### *Hypothesis 2: Moderation by Ethnicity*

The second hypothesis states that the effect of watching an allyship-based video intervention is moderated by ethnicity such that the effect of the allyship video would be stronger for non-white students than for white students.

A moderated regression analysis was conducted to explore the moderating effect of ethnicity on the relationship between video condition and feelings of inclusion, measured by the PGIS. Ethnicity had a significant main effect on PGIS scores,  $b = -14.12$ ,  $SE = 4.50$ ,  $t(59) = -3.14$ ,  $p = .003$ , 95% CI  $[-23.02, -5.22]$ , indicating that non-white participants scored significantly lower on the PGIS scale compared to white participants. Moreover, the interaction between the video condition and ethnicity was significant ( $b = 12.92$ ,  $SE = 6.42$ ,  $t(59) = 2.01$ ,  $p = .049$ ,  $f^2 = 0.07$ ), indicating that the effect of the allyship video on PGIS scores was stronger for non-white participants compared to white participants (see Figure 1). Therefore, the results of this analysis support the second hypothesis which states that ethnicity significantly moderates the impact of the allyship-based video intervention, with the effect being stronger for non-white students. The effect size for the interaction, however, was small.

**Figure 1**

*Interaction of Ethnicity and Video Condition on PGIS Scores*



Interestingly, the figure shows that the allyship video does not seem to be more or less effective for different ethnic groups. However, the friendship video appears particularly ineffective for non-white students, who report lower feelings of inclusion when exposed to it.

***Hypothesis 3: Moderation by Socioeconomic Background***

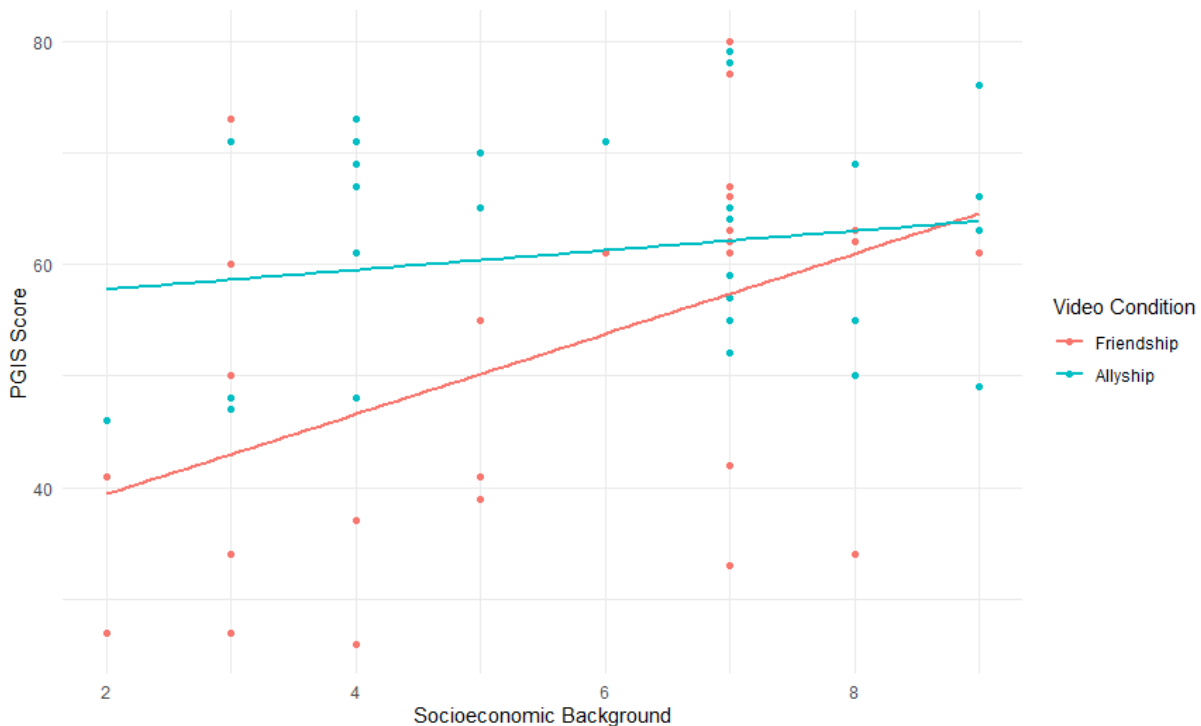
The third hypothesis of this research states that the effect of watching an allyship-based video intervention is moderated by socioeconomic background such that the effect will

be stronger for students with a relatively low socioeconomic background than for students with a relatively higher socioeconomic background.

A multiple linear regression analysis was conducted to examine whether socioeconomic background moderates the effect of watching an allyship video on PGIS scores. Figure 2 illustrates the interaction between video conditions and socioeconomic background on PGIS scores. The main effect of the video condition was significant,  $b = 23.79$ ,  $SE = 9.45$ ,  $t(59) = 2.52$ ,  $p = .015$ , suggesting that participants in the allyship condition had significantly higher PGIS scores compared to those in the friendship condition. Furthermore, socioeconomic background had a significant main effect on PGIS scores,  $b = 3.59$ ,  $SE = 1.10$ ,  $t(59) = 3.27$ ,  $p = .002$ , indicating that higher socioeconomic background was associated with higher PGIS scores. The interaction between watching an allyship video and socioeconomic background was not significant at the .05 level,  $b = -2.72$ ,  $t(59) = -1.77$ ,  $p = .081$ ,  $f^2 = 0.09$ . Nevertheless, the data indicates a trend where the positive effect of the allyship condition on PGIS scores decreases as socioeconomic background increases. However, this moderating effect of socioeconomic background was not statistically significant, thereby not supporting the third hypothesis.

**Figure 2**

*Interaction of Socioeconomic Background and Video Condition on PGIS Scores*



It is interesting to mention that the figure shows that the allyship condition maintains relatively stable effects on PGIS scores across different socioeconomic backgrounds. However, it is the friendship condition that appears particularly unsuitable for increasing PGIS scores among low socioeconomic background students, who report lower feelings of inclusion when exposed to this video. Although this finding is not statistically significant, it suggests that while the allyship video consistently supports inclusivity, the friendship video may fail to do so for students with a relatively low socioeconomic background.

#### ***Hypothesis 4: Moderation by Credibility***

The fourth hypothesis of this study states that the effect of watching an allyship-based video intervention is moderated by ratings of message credibility. Specifically, it was predicted that students who rate the allyship video relatively high in credibility would report higher feelings of inclusion.

Another multiple linear regression analysis was performed to examine whether credibility moderates the effect of watching an allyship video on PGIS scores. Credibility did not have a significant main effect on PGIS scores,  $b = 2.11$ ,  $SE = 2.64$ ,  $t(59) = .80$ ,  $p = .428$ , indicating that higher credibility was not associated with higher PGIS scores. The interaction between watching an allyship video and credibility was also not significant,  $b = 1.06$ ,  $SE = 3.63$ ,  $t(59) = .29$ ,  $p = .772$ . These results do therefore not support the fourth hypothesis, as the credibility of the message did not predict PGIS scores in either condition.

#### **Exploratory Testing**

Finally, a series of independent samples t-tests were conducted to compare the affective responses between the control and experimental groups. Descriptive statistics for the affective responses are shown in Table 2.

**Table 2**

*Descriptive Statistics for Affective Responses*

Affective Response	Video Condition	<i>M</i>	<i>SD</i>
Inspiring	Allyship	4.94	0.72
	Friendship	4.10	1.04
Annoying	Allyship	1.81	0.90
	Friendship	2.39	1.02

Engaging	Allyship	3.72	0.73
	Friendship	3.29	0.97
Interesting	Allyship	3.91	0.73
	Friendship	3.06	1.06

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The results indicated a significant difference in how inspiring the video manipulations were perceived,  $t(61) = -3.74, p < .001$ , with participants in the allyship condition reporting higher levels of inspiration compared to the friendship condition. Additionally, there was a significant difference in how annoying the videos were perceived,  $t(61) = 2.37, p = .021$ , with the friendship group finding the video manipulation more annoying than the allyship group. The perception of engagement was marginally significant,  $t(61) = -1.98, p = .052$ , which suggests a trend where the allyship group found the video more engaging than the friendship group. Finally, there was a significant difference in how interesting the video was considered,  $t(61) = -3.67, p < .001$ , with the allyship group rating the content as more interesting compared to the friendship group. These results suggest that the allyship video had a positive effect on participants' affective responses, particularly in making the content more inspiring and interesting while reducing annoyance.

### Discussion

This study aimed to investigate how digital allyship-based video interventions impact feelings of inclusion among a diverse sample of higher education students. Accordingly, the research question has been formulated as: “How do allyship-based video interventions impact feelings of inclusion among university students from diverse backgrounds?” The study was administered through a between-subjects design, where participants in the experimental condition watched an intervention video with an allyship message based on theoretical framework by LeMaire et al. (2020). The respondents’ feelings of inclusion were measured by the Perceived Group Inclusion Scale (Jansen et al., 2014). The findings indicate that watching an allyship-based video intervention increases feelings of inclusion among a diverse set of university students. Additionally, the interaction between the video condition and ethnicity was found to be significant. However, the interaction between the video condition and socioeconomic background was not found to be significant. Similarly, no significant moderating effect of credibility was observed.

### Impact of Allyship Video Intervention on PGIS Scores

The first hypothesis of this study predicted that students who watch an allyship-based video intervention would report higher feelings of inclusion than students who do not watch such a video. The present result supports this hypothesis as participants in the allyship condition scored significantly higher on the PGIS compared to those in the friendship condition.

This finding aligns with previous research which found that digital videos are impactful psychological interventions to reduce feelings of social isolation (Harshbarger et al., 2021; Janoušková et al., 2017, Toh et al., 2022). Specifically, it adds to research from Panesi et al. (2020) which revealed that using digital technology in the educational setting can enhance feelings of inclusion. Moreover, the increase in inclusion scores among students who watched the allyship video suggests that the content and delivery of the allyship message resonated with the participants. This aligns with the theoretical framework by LeMaire et al. (2020), who stressed the importance of allyship behaviours to promote inclusivity. The allyship video in this study incorporated these specific behaviours, which therefore likely contributed to its effectiveness. This is further supported by the students' positive affective responses as they found the allyship video more inspiring, engaging, interesting, and less annoying compared to the friendship video.

It is important to consider that an alternative explanation for this finding could be due to the novelty effect, where participants' responses are influenced by the new and engaging format of the intervention (Mirnig et al., 2020). However, the significant and positive affective responses to the allyship video, such as students finding it inspiring and interesting, suggest that the content itself indeed played a crucial role in reinforcing feelings of inclusion, rather than just the novelty of the video animation format.

### **Moderation by Ethnicity**

The second hypothesis predicted that the effect of watching an allyship-based video intervention on feelings of inclusion would be moderated by ethnicity such that the effect of the allyship video would be stronger for non-white students than for white students. The results support this hypothesis as they demonstrated a significant interaction between video condition and ethnicity. The effect of the allyship video on PGIS scores was significantly stronger for non-white participants than for white participants.

However, it is important to note again that, when decomposing the interaction effect, the significant difference in PGIS scores based on ethnicity was more pronounced in the friendship condition. In the friendship group, non-white participants scored significantly lower on PGIS compared to white participants. This indicates that the more neutral friendship



video did not effectively help to address feelings of inclusion for non-white students, who likely experience deeper issues of marginalisation that simple social interactions like friendships do not sufficiently alleviate.

This finding aligns with existing literature which emphasises the unique challenges faced by especially non-white students in higher education. For instance, research by Harper and Hurtado (2007) and Bunce et al. (2019) have documented the systemic inequalities, racial biases, and microaggressions that lead to feelings of exclusion among non-white students. In contrast, white students may not have experienced the same level of impact from the allyship video, potentially because they do not encounter the same systemic barriers and thus may not fully appreciate the video message. The significant increase in inclusion scores for non-white students who watched the allyship video therefore further demonstrates the persistent differences between white and non-white students in academia. Nonetheless, the result also suggests that this digital intervention method could effectively address the burdens faced by ethnic minorities in academia and, consequently, assist in diminishing the gap in feelings of inclusion between white and non-white students.

Furthermore, the greater impact of the allyship video on non-white students may be attributed to the video's focus on essential allyship behaviours. The content of the video focused especially on crucial allyship behaviours such as empathic listening and creating a higher education environment where minority perspectives are acknowledged and appreciated (LeMaire et al., 2020). Based on the findings of this study, it appears that these allyship behaviours are particularly important to non-white students, who often feel marginalised in predominantly white institutions. This is consistent with research from LeMaire et al. (2020), who emphasised that allyship behaviours, such as those demonstrated in the video, can foster a more inclusive and supportive academic environment for minority group students.

Additionally, the significant moderation by ethnicity can be contextualised within the framework of social identity theory (Tajfel & Turner, 2004). According to this theory, individuals derive a sense of identity and self-esteem from their group memberships. For non-white students, who may often feel like outsiders within the university community, the allyship video likely reinforced a positive group identity and promoted feelings of acceptance and belonging.

### **Moderation by Socioeconomic Background**

The third hypothesis predicted that the effect of watching an allyship-based video intervention on feelings of inclusion would be moderated by socioeconomic background. Specifically, it was predicted this effect would be stronger for students with a relatively low

socioeconomic background than for those with a relatively high socioeconomic background. However, this hypothesis was rejected as the interaction between video condition and socioeconomic background was not statistically significant.

Nevertheless, the results from testing this hypothesis still indicated that socioeconomic background had a significant main effect on feelings of inclusion. Generally, higher socioeconomic backgrounds were associated with higher inclusion scores among all participants. This finding is consistent with existing literature which suggests that students from higher socioeconomic backgrounds generally find it easier to integrate and navigate within university environments that predominantly reflect middle- to upper-class cultural norms and values (Jury et al., 2017; Rubin, 2012).

However, it appears that this finding may not fully align with the claim from LeMaire et al. (2020) that allyship messages enhance feelings of inclusion among less privileged students. Given the result from the second hypothesis, it seems that minority ethnic students benefit more from allyship messages than minority students in terms of social class. Therefore, allyship behaviours may not equally address all forms of marginalisation. However, it should be noted that any interpretations regarding this hypothesis must be approached with caution due to the small number of participants from low socioeconomic backgrounds in the study. One possible explanation for the non-significant result could be the homogeneity of the sample in terms of socioeconomic status. Even though the study indeed included participants from a range of socioeconomic backgrounds, the majority of the sample leaned towards middle to upper-middle socioeconomic backgrounds. This, in turn, might reduce the variability needed to detect a significant moderation effect.

Another explanation could be due to the content of the allyship video. The video focused mainly on addressing issues from ethnic minorities and might not have adequately addressed and acknowledged the burdens specifically faced by students coming from a lower social class. This highlights a potential limitation of the intervention that was used in this study. Consequently, it is suggested that more tailored content is necessary to effectively support diverse student groups facing different types of barriers. Ultimately, even though the third hypothesis was not supported, the significant main effect of socioeconomic background on feelings of inclusion highlights the ongoing influence of social class in higher education settings.

### **Moderation by Credibility**

The final hypothesis of this study proposed that the effect of watching an allyship-based video intervention on feelings of inclusion would be moderated by the perceived

credibility of the message. Specifically, it was expected that students who rated the allyship video as highly credible would report higher feelings of inclusion. The results did not support this hypothesis, as the interaction between video condition and message credibility was not statistically significant.

This finding suggests that the perceived credibility of the allyship message did not significantly influence the effectiveness of the intervention in enhancing feelings of inclusion among students. One possible explanation is that the core content and delivery of the video, which focused on essential allyship behaviours, were sufficient to impact feelings of inclusion regardless of perceived credibility. This implies that the themes of allyship and inclusion presented in the video resonated with participants on a fundamental level. Furthermore, the credibility ratings were relatively high in both conditions ( $M = 3.54$ ,  $SD = 0.98$ ). This consistency in high credibility ratings suggests a potential ceiling effect, where the high perceived credibility of the message might have overshadowed any subtle differences in impact.

Furthermore, the lack of a significant moderation effect by message credibility does not align with literature which emphasises the importance of authenticity in promoting social change. For example, Kutlaca and Radke (2022) highlight how performative allyship, which lacks genuine commitment, can undermine efforts to support marginalised groups. In this study, the absence of a significant effect might therefore indicate that students did not perceive the video as performative but rather as a sincere attempt to promote inclusion. Additionally, this finding can be contextualised within the framework of the Elaboration Likelihood Model (ELM) proposed by Petty and Cacioppo (1986). According to ELM, individuals process messages either through the central route, involving thoughtful consideration of content, or the peripheral route, involving superficial cues like source credibility. In this study, it appears that participants may have engaged with the video through the central route, focusing on the message content. This suggests that the allyship message was compelling enough to influence feelings of inclusion without relying on credibility cues.

### **Practical Implications**

The findings of this study also allow for three practical implications. Firstly, the findings show that universities should recognise the importance of the concept of allyship regarding their diversity initiatives. The results suggest that the strategic use of majority group members, or “allies”, can indeed foster a more inclusive environment where allyship behaviours might be modelled and encouraged. This, in turn, can help to construct a more positive campus culture. By incorporating the concept of allyship into diversity programs,

universities can therefore promote a more welcoming and accepting atmosphere to all their students from different backgrounds.

Secondly, the results indicate the need for tailored interventions which address the specific challenges faced by diverse student populations. The study highlighted that while allyship messages significantly benefited non-white students, they were less impactful for students from lower socioeconomic backgrounds. This suggests that universities should develop more customised content that considers the unique experiences of various minority groups. By creating interventions that are designed to the specific needs of different minority groups, universities can more effectively support inclusion and foster a sense of belonging among all students. Additionally, diversity efforts need to consider the intersectionality of identities, as students may belong to more than one minority group, each with its own set of challenges (Atewologun, 2018). Addressing these intersecting identities will allow for more comprehensive and inclusive interventions. However, it is important to acknowledge that additional research is needed to refine these interventions and ensure their effectiveness across diverse contexts.

The final implication regards the promotion of short video interventions as a powerful tool to promote inclusion (Harshbarger et al., 2021; Janoušková et al., 2017). Even though this study has used brief two-minute-long online video interventions, it was found that this approach can positively affect inclusivity. Such videos can be used to strengthen and complement existing diversity-related efforts by universities, and possibly other institutions. For example, institutions might consider distributing such brief intervention videos in their online environments, via social media, or through e-mail. By utilising the engaging and accessible video format, universities can ensure that inclusive messages reach a wider audience which might benefit from the content.

### **Limitations and Directions for Future Research**

Despite the valuable insights and implications, it is essential to recognise several limitations of this study based on which various recommendations for future research can be made. Firstly, with 63 participants in the final dataset, the sample size was relatively small and fell short of meeting the 68 participants required by the power analysis. This limits the generalisability of the present findings. A larger and even more diverse sample, in terms of ethnicities and socioeconomic backgrounds, would provide a more comprehensive understanding of the effects of allyship-based interventions across different student populations. Additionally, future research may also include other minority group students that

this study has not focused on, such as LGBTQ students or students with disabilities (Maddah, 2018).

A second limitation concerns one of the main measurements of this study. The PGIS used in this study showed an excellent internal consistency ( $\alpha = .96$ ). However, considering the similarity of the scale's items, this could indicate that the scale might only measure a narrow aspect of inclusion. This raises concerns about whether the PGIS captures the full complexity of students' feelings of inclusion. Thus, instead of relying solely on the PGIS, future research could use or develop additional measures to better assess the multifaceted nature of inclusion. Specifically, creating a scale that more precisely measures feelings of inclusion in the context of academia would possibly allow for more nuanced insights. This can provide a better understanding of how different aspects of inclusion are influenced by allyship-based interventions.

Thirdly, the effect sizes for the moderation analyses were small which suggests that the implications might be limited. Future research should investigate ways to increase these effects. This might be done by exploring different types of video interventions or varying the duration of exposure.

Fourth, while the study explored the concept of allyship, it did not adequately address the issue of performative allyship. Using a single-item measure to assess message credibility in this study might not have been sufficient to fully explore the complex concept of performative allyship and its association with the video intervention. Therefore, future studies should delve deeper into the association between allyship video interventions and the concept of performative allyship. Exploring more refined measures and using multi-item scales to assess the authenticity of allyship behaviours will help clarify their effects on fostering a genuine sense of inclusion among students.

Moreover, participants considered the friendship video in the control condition significantly more annoying than the allyship video. This reaction could have influenced their responses, potentially skewing the comparison between the experimental and control groups. Hence, it would benefit future research to ensure that control materials are more neutral and equally engaging to avoid potential biases. By developing control condition videos that are more engaging and neutral, researchers can minimise any potential biases and ensure a more accurate comparison between experimental and control groups.

Finally, the present study was cross-sectional, which limits the ability to assess changes over time. Conducting longitudinal studies would therefore provide valuable insights into the long-term effects of allyship-based video interventions on feelings of inclusion. By

doing so, researchers could track changes in students' feelings of inclusion over time, which allows them to monitor the evolution of their psychological responses to allyship-based video interventions. Hence, following students over an extended period can offer a deeper understanding of how video interventions contribute to sustained inclusivity in higher education settings.

### **Conclusion**

Despite certain limitations, this study allowed for a first exploration and observations regarding the potential of allyship-based video interventions to enhance feelings of inclusion among university students from diverse backgrounds. It was revealed that even brief exposure to a digital intervention video can have a positive impact on campus inclusivity. Specifically, the findings demonstrated high levels of inclusion for both majority and minority groups, with the allyship video intervention showing even greater benefits for students from ethnic minority groups. Thus, the findings of this study contribute to the field of educational psychology by highlighting the potential and value of digital allyship-based videos as a driving force towards promoting social inclusion and equality in academia. Future research should continue to explore and expand on these modern intervention methods to enhance their positive impact.

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## Appendix A

### Survey Measures

#### Demographic Questionnaire

1. What is your gender?

- Male
- Female
- Non-binary / Third gender
- Prefer not to say

2. What is your age?

3. Which ethnic group do you identify with?

- White
- Non-white (Mixed, Black, Asian, Hispanic, etc.), namely: \_\_\_\_

4. Please indicate the socioeconomic status you experienced during your upbringing by selecting the rung on the ladder below that best represents your perception of your living conditions. The top of the ladder (Rung 10) represents the highest socioeconomic background. The bottom (Rung 1) represents the lowest socioeconomic background. At the top of the ladder, people come from families that are the best off (e.g. "most" money and "best" jobs). At the bottom are people who come from families that are the worst off (e.g. "least" money and "worst" or no jobs). Socioeconomic status involves aspects such as perceived social class and overall financial resources. Please select the number corresponding to the rung that best reflects your socioeconomic status during your upbringing.



(Q4: To be answered on a 10-point scale)

### **Affective Responses**

*Note: All items are to be answered on a 5-point scale, ranging from “strongly disagree” to “strongly agree”*

How much do you agree with the following statements?

1. The video from Allie was inspiring.
2. The video from Allie was annoying.
3. The video from Allie was engaging.
4. The video from Allie was interesting.

### **Message Credibility**

How credible did you find Allie in this video? Rate her credibility on a scale from 1 to 5, where 1 indicates "Not at all credible" and 5 indicates "Extremely credible."

By credible, we mean how much did you believe what she said.

### **Perceived Group Inclusion Scale (PGIS) - Adjusted to the University Context**

*Note: All items are to be answered on a 5-point scale, ranging from “strongly disagree” to “strongly agree”*

Imagine that the topic Allie discussed in the video addresses your current university community. How would you rate the following statements?

1. My university community makes me feel that I belong.
2. My university community makes me feel part of the group.
3. My university community makes me feel that I fit in.
4. My university community treats me as an insider.
5. My university community likes me.
6. My university community appreciates me.
7. My university community is pleased with me.
8. My university community cares about me.
9. My university community allows me to be authentic.
10. My university community allows me to be who I am.
11. My university community allows me to express my authentic self.
12. My university community allows me to present myself the way I am.

13. My university community encourages me to be authentic.
14. My university community encourages me to be who I am.
15. My university community encourages me to express my authentic self.
16. My university community encourages me to present myself the way I am.

## Appendix B

### Video Manipulation Scripts

#### Experimental Condition (Allyship) - 2:49

W. Amoo

C. van Os

Link to the video: <https://youtu.be/26Yn8TmKwHA>



"Hey there, my name is Allie - I am a student here at university."  
[4s]



"So, I've been thinking a lot lately about our university campus. It's such a vibrant and diverse place, isn't it? We've got students from all walks of life - different ethnicities, backgrounds, and socioeconomic statuses. And that's amazing! But you know what?" [13s]



"Being part of such a diverse community also means we must support each other, especially those who might face additional challenges due to their background or identity! That's why, today, I want to talk with you about something really important ..." [12s]

## ALLYSHIP



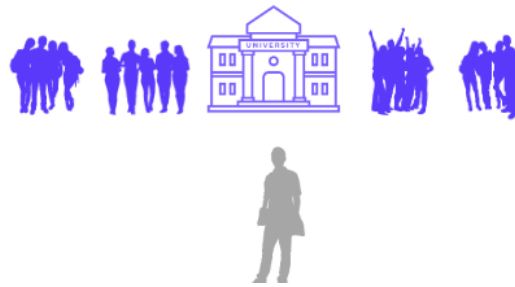
"... allyship! You might already be familiar with the term - it has become quite popular over the years ... Being an ally means showing solidarity with marginalised people, right? Technically, yes ... but being an ally isn't just about **saying** you support marginalised communities - it's about **really taking action**, even when it's not easy." [15s]

WHITE  
STABLE  
FINANCIAL  
BACKGROUND



"You see - me, myself? I belong to the majority group of university students - I am ethnically white and grew up rather financially stable. For me, it's relatively easy to blend into

the university community. But for others, that might not be the case." [14s]



"Take Samuel, for example. He's one of the brightest minds in our class, but he's always seemed a little distant - as if he's holding back a part of himself. Once, he told me that he feels a bit like an outsider ever since he got to university. It felt for him as if he did not belong here, as if this was not his place." [18s]

## ALLYSHIP



"So, in trying to be an ally, what should I do now?"

"I shall solve the problems of the less-privileged!"



"... actually, I'm all good."



"First, don't assume that you are this guardian angel saviour-like figure. It might come across as inauthentic and might make those affected feel more uncomfortable. Rather than that, be humble and willing to learn more and also explore your own potential biases. "Therefore, it all starts with one easy thing ... **listening!** True listening" [18s]





"I remember this one day when I asked Samuel to grab a coffee together. I told him that I kept thinking about him saying that he feels like an "outsider" and that I wanted to know why that is. He started hesitantly, but quickly felt more comfortable opening up about his experience as a son of Nigerian immigrants who's also the first to go to university out of his family. I learned so much more about his perspective. And this simple thing is one of the most important things about being an ally"

CREATE AN ENVIRONMENT  
WHERE MINORITY GROUP  
VOICES ARE HEARD AND  
VALUED!

"- creating an environment in which voices of minority groups are truly heard and valued!"



“And of course, being an ally also includes other behaviours like speaking out against prejudice or introspection. But it starts with having a humble attitude and being willing to learn more about others’ experiences.”



“This way, we as the university community, can move closer to creating an inclusive campus!”



“A campus, where everybody - including Samuel - feels like they belong!”

---

**Control Condition (Friendship) - 2:31**

W. Amoo

C. van Os

Link to the video: <https://youtu.be/ALM27GrWxFI>



"Hey there, my name is Allie - I am a student here at university."



"So, I've been thinking a lot lately about our university campus. It's such an amazing and vibrant place, isn't it?"

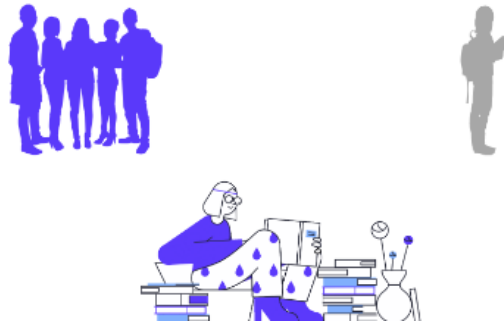


"Being on campus also means we have the opportunity to form meaningful connections with the other students we encounter regularly. That's why, today, I want to talk with you about something really important ..."

# FRIENDSHIP



"... friendship! Making friends on campus allows us to learn from each other and grow together. It's about being there for one another, sharing laughs, and creating memories."

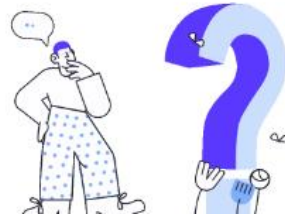


"You know, when I look around campus, I realise how fortunate I am to have found such a great network of friends. Blending into the university community has been relatively smooth for me, thanks to these friendships. But I know that's not the case for everyone."



"Take David, for example. He's one of the brightest minds in our class, but he's always seemed a little distant - like he was nervous about starting university and entering this new environment."

# FRIENDSHIP



"So, how is it that we can actually make friends?"

"I shall make you my friend!"



"... actually, I'm all good."



"First, making friends is about approaching and talking to people, but let's acknowledge that it can be challenging sometimes. So, don't worry about trying to be everyone's best friend. Instead, simply start by striking up a conversation with those around you. Essentially, it all begins with just talking to each other."



"I remember this one day when I asked David to grab a coffee and study together. We quickly hit it off, chatting about random stuff and sharing stories. It was just a casual hangout, but we ended up having a great time! Since then, we've had countless study sessions together and shared lots of laughs. Making friends can be as simple as striking up a conversation and seeing where it leads! And that's one of the things I love about the university campus ..."

## MAKING NEW FRIENDS AND HAVING FUN!

“- making new friends and having fun!”



“Whether it's celebrating achievements or offering a shoulder to lean on during challenges, friends are there for each other every step of the way.”



“By making new connections, we can move closer to creating a friendly campus!”



"A campus, where everybody - including David - feels like they can make friends and have fun!"

## Appendix C

### Informed Consent Letter



**Title:** Experiences in the University Environment  
**Investigators:** Wesley Amoo and Cato van Os  
**Supervisor:** Elena Bacchini

**Introduction:**

You are being invited to participate in a research study. Before you decide whether or not to participate, it is important that you currently are a student in any form of higher education, meaning university or HBO. You must understand why the research is being conducted and what your participation will involve. Please take your time to read the following information carefully. If you have any questions about the study, feel free to send us an email at one of our addresses: [REDACTED] (Wesley) or [REDACTED] (Cato).

**Purpose of the Study:**

The purpose of this study is to investigate students' experiences in higher education. If you agree to participate, you will be asked to fill in a few questions about your demographics. Afterwards, you will be shown a video and will be asked to fill in a questionnaire.

**Duration of Participation:**

Your participation in this study will last approximately 15 to 20 minutes and 1 PPU will be granted after finishing the survey.

**Confidentiality:**

Your confidentiality will be strictly maintained throughout the study. All data collected is confidential, and anonymous and will be kept within Utrecht University. Data will be used for scientific research purposes only. Your participation in this study is voluntary. You have the right to withdraw at any time without penalty or consequence. If you have any complaints about the study, you may contact a neutral confidential contact: klachtenfunctionaris-fetcsocwet@uu.nl

**Statement of Consent:**

I have read and understand the information provided above. I have had the opportunity to ask questions and have received satisfactory answers. By signing this form, I voluntarily consent to participate in the study.

*Note.* All privacy-sensitive information has been blacked out.