

Social Stigma and Subsequent Competitive Behavior

Natalia I. Valdez Gonzalez, Marco A. Palma, Alexander L. Brown

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Abstract

Inequality gives rise to the emergence of social status. Some are driven to showcase a desirable status, while others experience stigma from low status environments. We study how eligibility for a social benefit influences preferences for competitiveness. We exogenously manipulate the benefit eligibility in which we expanded the eligibility criteria. Expanding the eligibility criteria did not change the competitiveness of the low performing group, but the middle-income group was affected by the eligibility of the benefits with a 51% reduction in competitiveness. We conclude that the social benefit eligibility reduces competitiveness across treatments for the middle performing group.

1 Motivation & Purpose

Income and resource inequalities are prevalent in modern society. Inequality gives rise to social classes and with it the emergence of social status based on desirable social image characteristics. People are driven to showcase a desirable status in different market contexts through consumption of prestigious goods and services (Bursztyn, Ferman, Fiorin, Kanz, & Rao, 2017; Clingingsmith & Sheremeta, 2018). On the other hand, people also experience stigma from low status environments, such as qualifying for special assistance programs due to low income or performance (Moffitt, 1983). Many government and nonprofit organizations offer assistance programs to help individuals meet basic housing and food needs, special education, or remedial training (Andrade, 2002; Daponte, Sanders, & Taylor, 1999; Currie, 2001; Friedrichsen, König, & Schmacker, 2018). For example, in the United States, people in the lowest income bracket are eligible to receive benefits from social welfare programs to assist them in procuring food and healthcare ¹. Social welfare programs were originally conceived as temporary relief to encourage beneficiaries to prosper. In fact, the goal of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 was to reduce poverty cycles by encouraging worker integration into the labor force as an integral component of the assistance programs. While many able-bodied adults on social benefits are employed, a large proportion lack stable jobs with steady wages which makes them more likely to remain in special assistance programs ².

In this article, we study how eligibility for a special social benefit based on low performance influences preferences for competitiveness using the tournament entry game in Niederle and Vesterlund (2007). This research question is important because participation in welfare programs may affect the preferences for competition of eligible recipients and contribute to wage disparities. Given the possible sensitive nature of welfare participation,

¹As of 2019, 59 million Americans were eligible for one of the safety net programs, which accounts for about one fifth of the population (Minton & Giannarelli, 2019)

²Participants in Supplemental Nutrition Assistance Program (SNAP) remain in the program for an average of two years, depending on factors related to employment. See <https://www.cbpp.org/research/food-assistance/most-working-age-snap-participants-work-but-often-in-unstable-jobs>

stigma, and competition, the laboratory provides an ideal environment to study these relationships while controlling for factors that tend to be confounded in observational data, such as status assignment, ability, performance, and benefit eligibility. There are two stages in our experiment. In the first stage, participants are randomly assigned to groups of three and they respond to a general knowledge quiz and based on their performance they are assigned as the low, medium, or high performing individual with higher earnings for higher performance. The lowest-performing individuals are eligible to receive a ‘welfare benefit’ that they have to claim by coming to the front of the room, thereby inducing feelings of stigma associated with the benefit ³. We exogenously manipulate the benefit eligibility criteria by adding a plausible deniability treatment in which we expanded the benefit eligibility to the middle performing individuals. The size of the benefit relative to the earnings is 50% and 25% for the low and middle performance individuals, therefore, the benefit claim rates are high; over 85% of eligible individuals in both treatments claimed the benefit. Having a large proportion of subjects claiming the benefit is a convenient design feature in our experimental setup to observe the effect of welfare uptake on subsequent competitive behavior while keeping a manageable sample size requirement ⁴.

During the second stage subjects participate in a paid individual piece-rate task of adding up five two-digit numbers that serves as practice and to assess their own ability before deciding whether to enter a tournament competition in the same task. There are no differences in performance in the individual piece-rate task across the three status performance groups from the first stage. In terms of competitiveness, there are no differences in the propensity to compete for the high-status group across treatments nor for the low-status group. Expanding the eligibility criteria to the middle performing group did not change the competitiveness of the low performing group ($p = 1.0$). Interestingly, the middle-income group was strongly

³Eligible participants were informed that they could claim a token that can be redeemed for an extra \$1. In order to claim this token, they had to come to the front of the room when called by their assigned participant number.

⁴Power calculations based on Friedrichsen et. al. (2018), which estimates $N=266$ from their random and quiz treatments for a 0.8 power and alpha of 0.05.

affected by the eligibility of the benefits with a reduction in the rates of competition from 58% to 39%, representing a 51% reduction ($p = 0.06$). This effect is quite large. There are no differences in performance, risk preferences, or confidence about their relative performance in the middle status group.

Extensive literature has investigated the effects of social status on economic behavior, especially for high status in markets (Ball, Eckel, Grossman, & Zame, 2001; Clingingsmith & Sheremeta, 2018; Bursztyn, Ferman, et al., 2017). A high status is typically perceived as something desirable, and individuals seek to showcase or signal a high status through conspicuous consumption or consumption of prestigious goods visible to others (Veblen, 1899; Clingingsmith & Sheremeta, 2018; Bursztyn, Ferman, et al., 2017). Clingingsmith & Sheremeta (2018) provided participants the opportunity to make chocolate truffle purchases, a luxury good, in a laboratory-controlled setting and found that they purchased more to signal a high status when their consumption behavior was visible to others, indicating the presence of conspicuous consumption. Bursztyn, Ferman, Fiorin, Kanz, & Rao (2017) conducted a field experiment that exogenously altered the qualifications for eligibility of different credit card tiers; they find evidence of pecuniary emulation in that individuals sought the highest status level of credit cards they could attain. Butera et al. 2022 suggest that individuals are willing to pay to showcase their high status when status is related to gym attendance; they fit the behavior from their study to a structural model and find that high performers experience significant utility gains while low performers experience significant utility losses. While there has not been much literature focusing on stigma from low status, previous work documents that individuals experience stigma from participating in government benefit programs (Andrade, 2002; Daponte et al., 1999; Currie, 2001) or educational programs (Bursztyn & Jensen, 2015; Bursztyn, Egorov, & Jensen, 2017). Some literature documents benefit-eligibility stigma driving the decision to not take welfare benefits (Moffitt, 1983; Major & O'brien, 2005; Andrade, 2002). Specifically, eligible low-status individuals are less like to accept the benefit when their decision is visible to others compared to private

environments (Friedrichsen et al., 2018). Our research induces three different statuses, which gives us the opportunity to observe behavior for three distinctive status groups. We observe benefit take-up behavior when it is visible to others, yet we focus on the preferences for competitiveness and how benefit-eligibility stigma affects the decision to enter a tournament competition.

Preferences for competition have been extensively studied in previous literature. In general, the literature focuses on gender, finding robust results that women choose to compete at lower rates than men (Niederle & Vesterlund, 2007). However, identity seems to be a driver for competitive behavior (Shih, Pittinsky, & Ambady, 1999; Ibarra, Carter, Silva, et al., 2010; Zhang, Zhang, & Palma, 2020). Recent expansions in the competition literature also cover how identity more broadly affects preferences for competition. Social norms (Benjamin, Choi, & Strickland, 2010) associated with a specific identity may be drivers for how individuals choose to compete. When exploring how being associated with low economic status affects competition, Banker, Bhanot, & Deshpande (2020) find that poverty salience is associated with lower rates of competition. Given that in our experiment the stigma arises from having low cognitive ability and lower earnings, our environment aligns with previous literature investigating the role of socioeconomic status, financial scarcity, and performance in cognitive ability for different status levels (Mani, Mullainathan, Shafir, & Zhao, 2013; Hoff & Walsh, 2018). The research exploring socioeconomic status and markets has focused mainly on the high and the low status groups, but the middle status group may provide an interesting group to study benefit eligibility through plausible deniability since many policy discussions relate to defining the limits of eligibility. Plausible deniability occurs when an agent uses the context or environment to deny responsibility or intent for their own actions (Bolton, Dimant, & Schmidt, 2021; Gillies, Rigdon, et al., 2019). We add to the literature on social status by exploring whether plausible deniability reduces the stigma for the low status group. We also study whether plausible deniability affects the rates of competition of the middle status group.

We find that the social benefit eligibility reduces the competitiveness of the middle-status performing group. The social benefit is tied to a low-performing perception that seems to affect subsequent competitive decisions for the middle status group. The low status group did not increase competitiveness after the benefit is expanded to the middle status group in the plausible deniability treatment. The two tasks in our study are different by design and the performance in the first task did not affect the performance in the competitive environment task. The performance of the three status groups is the same during the second stage piece-rate and tournament tasks. Therefore, choosing to avoid competition was costly for the middle-status group. Those who were the top performers in the middle-income group could have increased their earnings by 60% if they chose to compete.

The rest of the paper is structured as follows. Section 2 presents a conceptual framework and hypotheses. Section 3 presents the experimental design. Section 4 presents the results. Section 5 provides discussion of the findings and implications for future work in this area.

2 Conceptual Framework

Akerlof and Kranton (2000) introduced identity and self-image into a utility framework where one's own actions and the actions of others are directly parameterized in the utility function. Benjamin, Choi, & Strickland (2010) add that inducing a particular social category has a marginal effect for increasing the strength of affiliation with an identity category. The utility function is then characterized by considering the strength of affiliation an individual has with a certain social category. The strength of affiliation to a social category drives an individual's decision to either engage with an activity as it aligns to a specific social category or engage in an activity that is opposite of what a particular social category may engage in.

In our study, we induce three statuses based on the performance of a quiz during stage 1. We assume that the individuals will attain some utility from the earnings in the task. They will either gain utility from choosing the piece-rate payment scheme or from entering

competition and winning it. However, individuals also gain or lose utility from entering the competition based on the prescribed notions of their assigned status and whether they should compete or not. More specifically, the unrelated assignment for the high-status (low-status) groups gives license to engage in competitive behavior while it penalizes it for the low-status individuals. Based on this simple utility framework, we present Hypothesis 1.

HYPOTHESIS 1: An induced status (from an unrelated task) affects the competitive behavior in a subsequent task.

Hypothesis 1a. Low status individuals will have the lowest rates of competition.

Hypothesis 1b. High status individuals will have the highest rates of competition.

Hypothesis 1c. Middle status individuals will compete at a rate between the high and the low status.

The participants in our study earn a status associated with general knowledge during the first stage of the experiment. When making the decision to compete, individuals may use the information regarding their relative status from the first stage to choose to compete in the second stage despite the fact that the tasks are unrelated. That is, their induced status during the first stage will affect their willingness to compete in the second stage. We expect that individuals in the high status will have the highest rates of competition, while the low status individuals will have the lowest competition rates. The middle status group's behavior remains an interesting question. Previous literature suggests that individuals seek to mimic high status individuals to generate a sense of belonging to a higher status (pecuniary emulation); however, when those who already attained a status see that the status is becoming more widely available, they will seek to distinguish themselves to a higher status (invidious comparison) (Bursztyn, Ferman, et al., 2017). Generally, we expect that the middle status group will compete at a level between the rate of the high-status group and the low-status group. Our theoretical framework predicts that individuals are susceptible to the

status assignment, and they will choose to compete according to the induced status during stage 1.

HYPOTHESIS 2: Expanding the benefit eligibility criteria to the middle group through plausible deniability will affect the competitive behavior of the low and middle status individuals.

Hypothesis 2a. Low status individuals will increase their competitive behavior relative to the control.

Hypothesis 2b. Middle status individuals will decrease their competitive behavior relative to the control.

Hypothesis 2c. High status individuals will compete at the same rate in the control and plausible deniability conditions since they are unaffected by it.

By introducing plausible deniability, we expect that the low-status group may use this setting as a justification and respond by increasing their rate of competition relative to the control. Plausible deniability affords this group the opportunity to reduce the impact of the benefit claim eligibility to their status identity. We expect an opposite behavior for the middle status group. In the control, only the low status group is eligible for the benefit transfer. However, in the plausible deniability treatment when the middle status group is eligible for the benefit, it makes them experience the stigma associated with the benefit. We expect that the competitive rates of the middle status group will decrease with the benefit eligibility in the plausible deniability treatment. The high-status individuals are unaffected by the benefit eligibility in the control and treatment conditions and hence we expect that their rates of competition will remain the same across these conditions.

HYPOTHESIS 3: Plausible deniability has heterogeneous effects on competitiveness by gender.

Previous literature on competitiveness demonstrates that women, in general, choose to com-

pete at lower rates than men, though this effect can vary or disappear when certain identities are induced. We can also expect from previous literature that an identity associated with being in a low socioeconomic status may drive individuals to compete less. We explore how gender and the identity of being in a low socioeconomic status may proceed in our study.

3 Experimental Design

The experiment was conducted in the Fall of 2019. The sample was drawn from the student body of a large university. We recruited a total of 276 participants for the study dispersed over 31 sessions which varied between 6 to 12 people per session. Treatments were randomly assigned at the session level. The participants were initially invited through a university’s bulk e-mail service. The participants signed consent forms, were seated at a computer station, and were assigned a unique identification number. The session monitor gave some basic instructions and the experiment started.

3.1 Stage 1: Status assignment and benefit allocation

In the first part of the experiment, the participants were randomly assigned to a group of three players that remain anonymous. Then, they had ten minutes to complete a 15-question general knowledge quiz that covered several topics and required no specific training to answer. The questions were selected from a bank of general knowledge questions ⁵ (Kassas & Palma, 2019). Participants were informed that their performance on the quiz relative to the other players in their randomly assigned group would determine their status and payment schedule as described in Table 1.

After completing the quiz, but before revealing performance, we employed the strategy method to ask all participants whether they would accept a \$1 benefit if they are eligible. We explained the eligibility terms which differ across the control and the plausible deniability.

⁵Mean and median correct answers were 7.50 (SD = 2.01) out of 15.

Table 1: Payment table

| Rank | Status | Payment |
|------|--------|---------|
| 1 | High | \$6 |
| 2 | Middle | \$4 |
| 3 | Low | \$2 |

Once they made their decision, we asked their beliefs about the proportion of eligible people in the room that would claim the benefit. Then participants found out their status based on their relative performance. For those who were eligible and requested the benefit, the session monitor called out their experiment ID publicly. Benefit claimers had to come up to the front of the room to receive a sheet of paper with an additional \$1 benefit to be added to their final compensation following a similar procedure in Friedrichsen, König, and Schmacker (2018).

3.2 Stage 2: Competition

In the second stage of the experiment, the participants engaged in a competitive tournament entry task following Niederle and Vesterlund (2007). First, they were asked to complete as many five two-digit summations as they could within five minutes under a piece-rate payment scheme. They were informed that they would receive \$0.50 per correct answer. They were provided with scratch paper but were not allowed to use calculators. After completing the first exercise, participants were assigned to do the same exercise again but had the option to choose between a paid piece-rate, the same way as the first exercise, or to participate in a tournament against the other two people within their group, that is, the same group from Stage 1. Specifically, they would receive \$1.50 per correctly calculated answer if they were the top performer, and \$0 otherwise. They were not informed of their performance in this task, however, after the participants completed these tasks, they were asked how they believed to have performed in the second task relative to the other two people within the group (top performer, middle performer, or lowest performer).

3.3 Stage 3: Additional tasks

The participants then revealed their risk preferences using a multiple price list (Holt & Laury, 2002), completed a social preferences task (Bartling, Fehr, Maréchal, & Schunk, 2009), completed a shyness scale (Cheek & Buss, 1981), and then answered some basic demographic questions. We collected these measures as control measures for competition and benefit claim rates. After completing these additional tasks participants found out their earnings and privately received their payments in sealed envelopes.

3.4 Treatments

The participants were randomly assigned to a Control condition or a Plausible Deniability treatment at the session level. The difference between the two groups was the eligibility criteria for the additional benefit in Stage 1. Specifically, in the Control group, only the low performance group were eligible for an additional benefit, similar to the treatment featured in Friedrichsen, König, and Schmacker (2018). In the Plausible Deniability treatment, low and middle performance individuals were eligible for the additional benefit. In this treatment, we expected to minimize the stigma/visibility low performance individuals as they can use plausible deniability for being in the middle performing group to reduce their stigma. We also explore how the eligibility for this additional benefit affects willingness to compete. choose the tournament. Conversely, we expect those who earned a lower status to have a higher propensity to select piece-rate.

4 Results

Table 5 in the appendix provides some summary statistics and a balance test. We find that our sample is balanced across our demographics.

We observe that the benefit take-up behavior of the participants in our sample is very high. The left panel of Figure 1 shows that the benefit take-up for low status in the Control

and in the Plausible Deniability treatment is similar at nearly 87%. On the right panel of Figure 1 we include the benefit take-up rate for the middle performance group in the plausible deniability treatment since they were eligible for the benefit in that treatment ⁶. Of this group, 98% claimed the benefit which is higher than the 87% eligible individuals in the Control treatment ($p = 0.04$). Since we employed the strategy method to elicit take up behavior, we also have on the claiming rate for ineligible middle-status individuals in the control. The take up rate is only slightly lower for the Control’s middle group ($p = 0.09$) and there is no difference in take-up rates for those in the high-status group.

Before showing the main results, we present the performance during the second stage across the three status groups in Table 2. Participants correctly answered 8.5 math problems on average in the piece-rate task and 10.4 math problems on average in the tournament task. The Control group had a slightly better performance in the piece-rate task than the Plausible Deniability treatment, but the performance in the tournament portion is not statistically different. All status groups performed the same on average in both tasks, and there are no differences in performance across gender. From this data, we can infer that any decision to compete is not related to performance across the three status groups.

RESULT 1: An induced status in an unrelated task affects subsequent competitive behavior.

Figure 2 features the tournament entry decision by status group and treatment. In the control group the low status group has the lowest competitive entry rates with 32.6%. The high-status group displays the highest rate with 67.4%. This rate of entry represents a significant difference in the rates of competition between the low- and high-status groups ($p < 0.01$). These results provide support for hypotheses 1a and 1b that the status assignment during stage 1 affects the subsequent competitive status and the low and high-status groups showcase the lowest and highest competition entry rates, respectively. For reference, the tournament entry rates in Niederle and Vesterlund (2007) are 35% for women and 73%

⁶We have also included the claim rate of the middle performance group in the Control treatment, even though they were not eligible for the benefit.

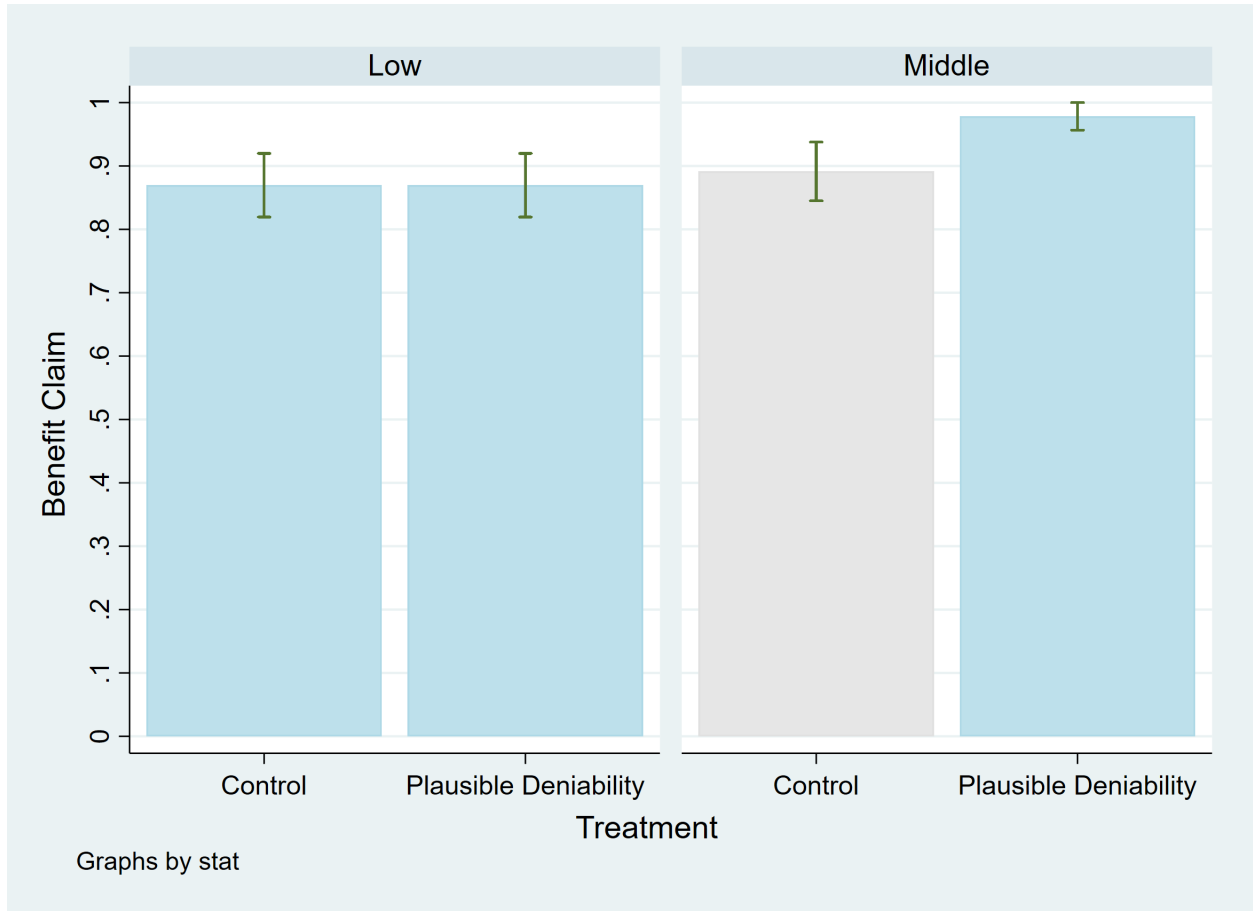


Figure 1: Benefit Claim for eligible statuses

Table 2: Performance in Stage 2, piece-rate and tournament tasks

| | Control | Plausible Deniability | p_{MW} |
|-----------------------------|---------|-----------------------|----------|
| Piece-rate task performance | | | |
| Overall | 9.0 | 8.0 | 0.02** |
| High | 9.2 | 8.5 | 0.13 |
| Middle | 8.9 | 7.8 | 0.26 |
| Low | 8.9 | 7.8 | 0.16 |
| Tournament task performance | | | |
| Overall | 10.7 | 10.1 | 0.14 |
| High | 10.8 | 10.0 | 0.14 |
| Middle | 10.9 | 10.1 | 0.20 |
| Low | 10.4 | 10.2 | 0.95 |

for men, so that the competition gap between the high and low status groups is similar to the original gender gap rate reported. Hypothesis 1c states that the middle-status group competes at a rate between the low status and the high status. The results show that the competition entry rates of the middle-income group are not statistically different than the high-status group in the control condition ($p = 0.39$). This result points that in the control, the middle-status group mirrors the competitive behavior of the high-status groups competing at a rate of 58.7% and 67.4% respectively ($p = 0.39$), distinguishing themselves from the low-status group ($p = 0.01$).

RESULT 2: Plausible deniability does not change the competitive behavior for the low-status group, but it decreases the competition entry rates for the middle-status group who become sensitive due to the benefit eligibility.

We first note that 32.6% of the low-status group choose to enter competition in both the Control and Plausible Deniability conditions, that is, those who are low status do not change their behavior across treatments ($p = 1.0$). This result indicates a rejection of hypothesis 2a. In the Control treatment, 58.7% of the middle-status group chooses competition which is not statistically different than the high-status group ($p = 0.39$). However, the middle-status group changes their behavior in the plausible deniability treatment. More specifically, the benefit eligibility in the Plausible Deniability treatment significantly reduces the rate of competition of the middle-status group to 39.1%, and it is not statistically different than the low status group ($p = 0.52$), and it is lower than the rate of competition of the high-status group ($p < 0.01$). Hence, we observe a significant decrease in the rate of competitiveness between the Control and the Plausible Deniability treatments for the middle-status individuals, providing support for hypothesis 1b ($p = 0.06$). As for the high-status group, we observe that 69.6% of this group enters the competition in the Plausible Deniability treatment, which is not statistically different from the 67.4% that enter competition in the Control condition

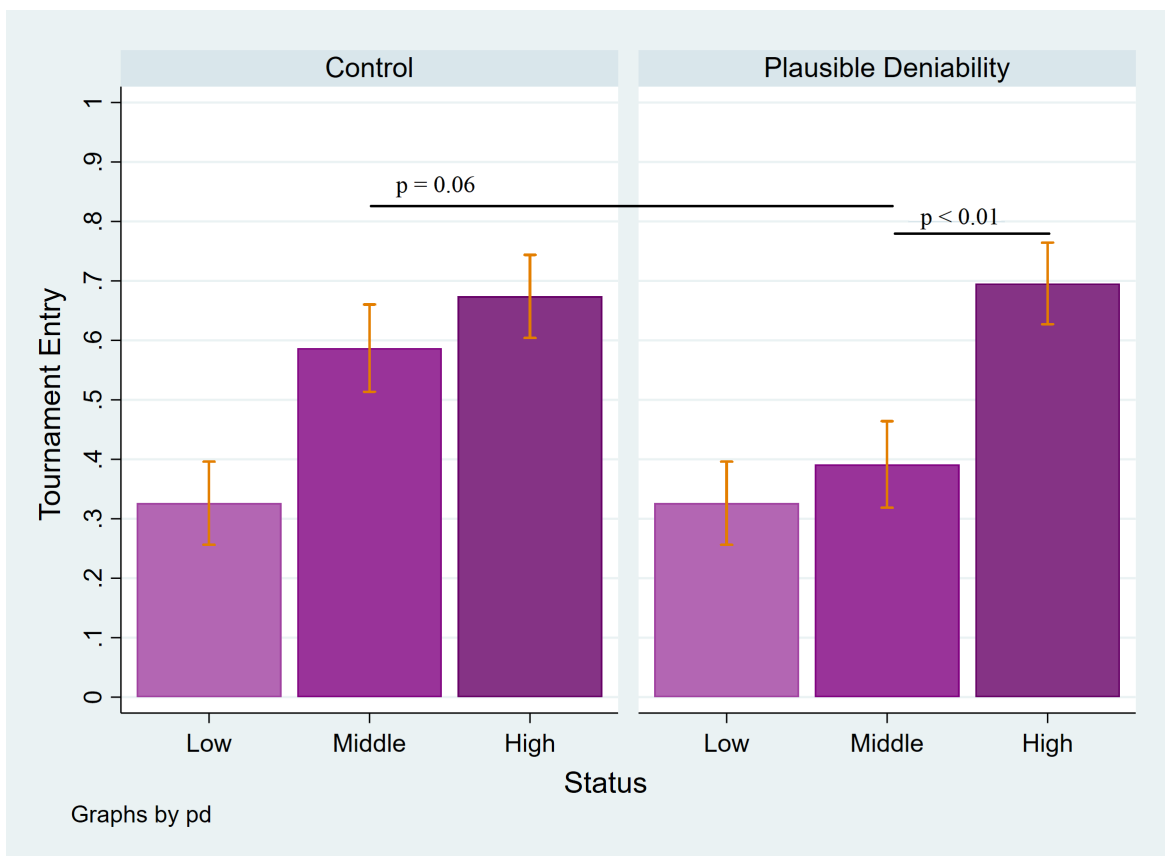


Figure 2: Tournament decision entry by status group

($p = 0.82$); the expansion of eligibility through plausible deniability does not affect those who earn a high-status providing support for hypothesis 2c.

To confirm the robustness of our findings, we estimate logit regressions on the tournament entry decision as a function of the treatments and additional control variables (Table 3). In the first specification (1), we only include the variable that captures the plausible deniability treatment. Assignment to the plausible deniability treatment without regarding anything else does not affect preferences for competition of the overall sample. In the second specification, we include interaction terms for being assigned low or middle status and the plausible deniability treatment. We find that being in either of these statuses and being assigned to the plausible deniability treatment is associated with a lower propensity to choose competition relative to the high-status group. In the third specification, we control for risk preferences and gender. We find that risk is not a significant determinant for entry into competition. However, being female is associated with significantly lower propensity to enter competition. This is consistent with findings in the literature regarding females and competition.

RESULT 3: Plausible deniability has heterogeneous effects on entry into competition and gender.

We conducted a subsample analysis to uncover the potential drivers behind this result. Specifically, we look at gender. As cited extensively in previous literature, we replicate the finding that women compete at a lower rate than men do, that is, 62% of the males enter competition whereas only 41% of the females enter ($p < 0.01$) (Niederle & Vesterlund, 2007). However, when exploring the different statuses by gender, there are some evident differences as shown in Figure 3. In the Control condition, we confirm that men compete at a higher rate than women for those with low or middle status. In the low status group, 47% of men enter competition whereas only 22% of females ($p = 0.07$). Similarly, in the middle status group, 77% of men enter competition whereas 46% of women enter competition ($p = 0.03$). However, this is not the case in the high-status group. Males with a high status enter the

Table 3: Logit regressions on entry into competition

| | (1) | (2) | (3) |
|---------------------------------------|-------------------|----------------------|----------------------|
| Plausible Deniability | -0.232 (0.241) | | |
| Plausible Deniability x Low status | | -1.010*** (0.348) | -0.965*** (0.356) |
| Plausible Deniability x Middle status | | -0.726** (0.337) | -0.806** (0.347) |
| Risk | | | -0.0263 (0.0612) |
| Female | | | -0.885*** (0.256) |
| Constant | 0.116 (0.171) | 0.285* (0.149) | 0.930** (0.389) |
| Observations | 276 | 276 | 276 |

Standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

competition at a rate of 74% and females enter at a rate of 63% ($p = 0.5$). Focusing on the Plausible Deniability treatment, we observe that the rate at which men and women compete is the same among low and middle status groups. Men in the low status enter competition 38% of the time, whereas women enter at a 30% rate ($p = 0.6$). Similarly, low-status men enter the competition at a 50% rate and women enter 29% of the time ($p = 0.15$). Meanwhile, high-status men compete at a rate of 80%, whereas high-status women only compete 57% of the time ($p = 0.09$). This significant rate of competition among high-status individuals by gender points to the fact that men and women may have differential responses to inducing identity norms.

In Figure 4, we separate the results by gender so we can isolate the effect of the status across treatments. Evaluating the status only for females shows that there is no difference in the tournament entry rates between the Control and the Plausible Deniability treatments by status groups (Low, $p = 0.51$; Middle, $p = 0.21$; High, $p = 0.69$); that is, each status group selects into competition at the same rate both in the Control and in the Plausible Deniability treatment. The same analysis for males reveals that there is a difference between

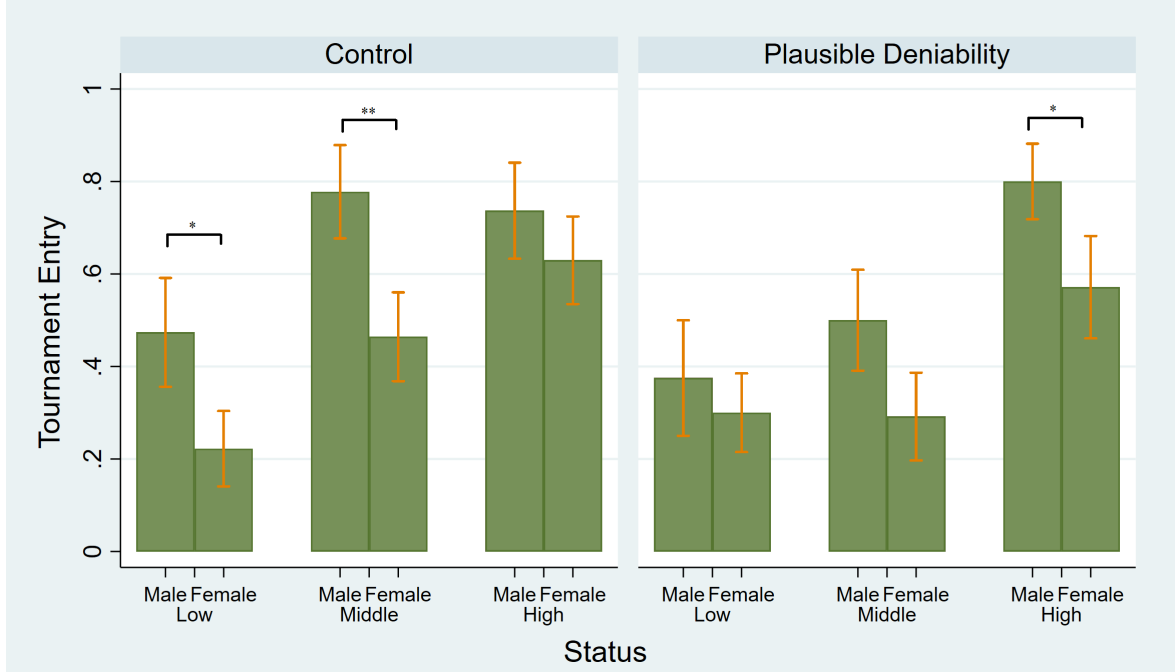


Figure 3: Tournament decision by status group and gender

middle-status males across the two treatments. Specifically, we see that middle-status males in the Plausible Deniability treatment compete at a lower rate than middle-status males in the Control ($p = 0.07$). This result provides an explanation behind the second result, in which we find that benefit eligibility expansion through plausible deniability reduces the likelihood of competition. The males in the low status compete the same across treatments ($p = 0.56$), and those who attain high status also compete at the same rate across treatments ($p = 0.62$).

To further explore the underlying mechanisms behind the tournament entry decisions, we also explore the beliefs participants held regarding their relative performance within their group of three to elicit relative confidence. Specifically, we asked participants whether they believed to be the top performer, the middle performer, or the lowest performer after the second part of the Niederle & Vesterlund (2007) task. Figure 5 shows the relationship between perceived relative performance elicited from beliefs versus actual relative performance. The continuous red line is where an accurate perceived relative performance would be mapped.

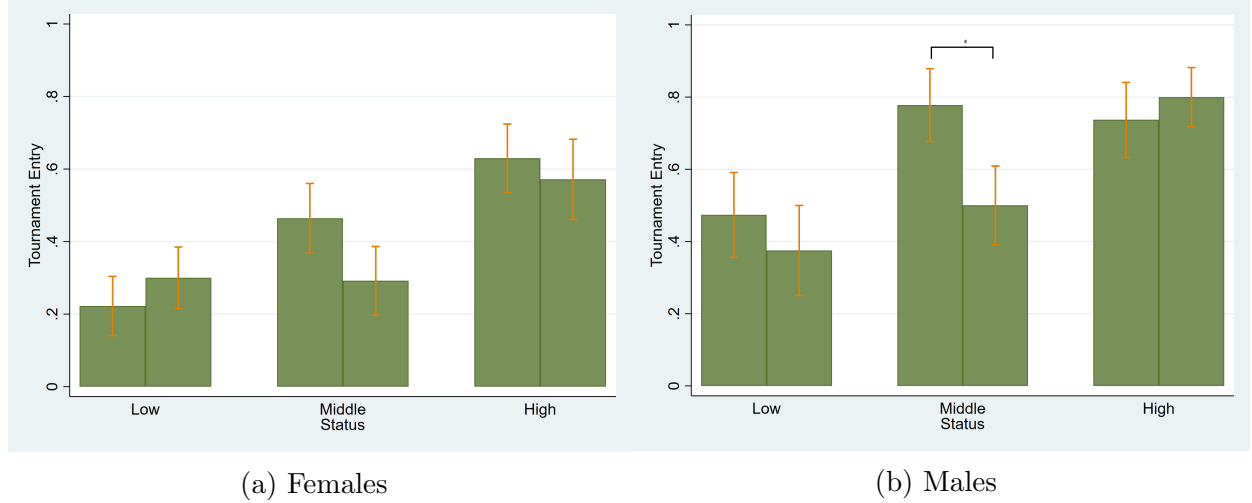


Figure 4: Tournament entry decision by status

The darker circles indicate a higher number of participants, whereas the empty circles indicate a lower number of participants. We find that less than four percent of our sample considers themselves to be the lowest performer; everyone else considers themselves either to be the middle performer in the group (53%) or the top performer in the group (44%) which may imply presence of the Dunning-Kruger effect. On average, we find that males are more confident than females in the overall sample which we may expect from the literature, but when we separate by treatment, we see this effect more pronounced in the Plausible Deniability treatment due to the fact that males consider themselves as the top performer at a higher rate while females consider themselves the top performer at a lower rate within the same treatment.

When we look further at the breakdown of statuses and gender within the Plausible Deniability treatment, we find that the females do not believe their performance to be as high as males consider their own performance.

Table 4: Relative Performance Beliefs

| | Top Performer | Middle Performer | Lowest Performer |
|--------------------------------|---------------|------------------|------------------|
| Overall | 0.44 | 0.53 | 0.04 |
| Male, overall sample | 0.55 | 0.42 | 0.03 |
| Female, overall sample | 0.35 | 0.61 | 0.04 |
| Control | 0.46 | 0.49 | 0.04 |
| Plausible Deniability | 0.41 | 0.56 | 0.03 |
| Low status | 0.33 | 0.64 | 0.05 |
| Middle status | 0.41 | 0.55 | 0.03 |
| High status | 0.60 | 0.38 | 0.02 |
| Selected into tournament | 0.62 | 0.37 | 0.01 |
| Did not select into tournament | 0.25 | 0.68 | 0.07 |
| Control | | | |
| Males | 0.48 | 0.50 | 0.02 |
| Females | 0.45 | 0.49 | 0.06 |
| Low status | 0.30 | 0.63 | 0.07 |
| Middle status | 0.48 | 0.48 | 0.04 |
| High status | 0.61 | 0.37 | 0.02 |
| Plausible Deniability | | | |
| Males | 0.62 | 0.35 | 0.03 |
| Females | 0.24 | 0.73 | 0.03 |
| Low status | 0.30 | 0.65 | 0.04 |
| Middle status | 0.35 | 0.63 | 0.02 |
| High status | 0.59 | 0.39 | 0.02 |
| Low Status | | | |
| Males | 0.50 | 0.50 | 0 |
| Females | 0.20 | 0.73 | 0.07 |
| Middle Status | | | |
| Males | 0.59 | 0.36 | 0.05 |
| Females | 0.13 | 0.85 | 0 |
| High Status | | | |
| Males | 0.72 | 0.24 | 0.04 |
| Females | 0.43 | 0.57 | 0 |

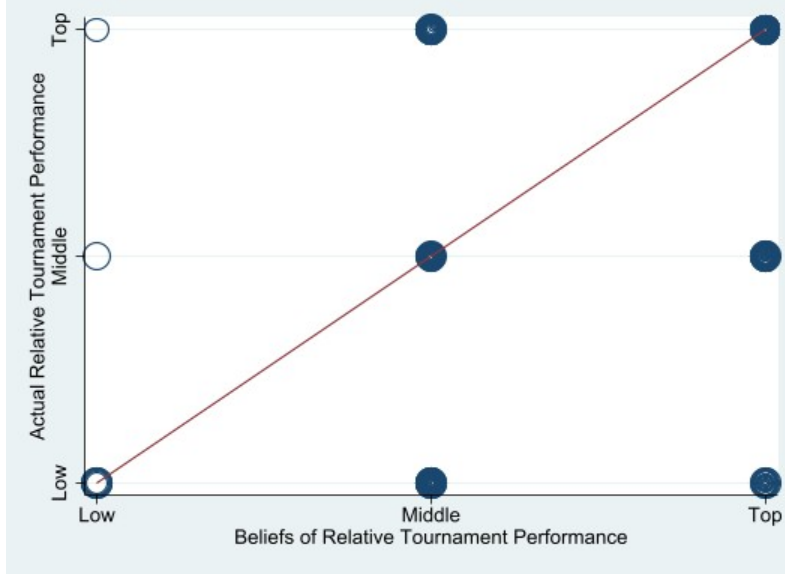


Figure 5: Perceived versus Actual Relative Tournament Performance

5 Discussion

We implement a laboratory experiment where we can control the environment for factors that are normally correlated in observational data while addressing potential ethical constraints. We find evidence that a status based on performance from one task influences the subsequent competitiveness in an unrelated task in which performance did not differ for the status assignment during the first stage. Furthermore, we find that expanding benefit eligibility through a plausible deniability treatment reduces the tournament entry rates for the middle-status individuals. Other related measures such as performance ability, confidence and risk do not explain the difference in the rates of competitiveness. This result showcases that being exposed to social identity status in social benefit eligible programs can have significant effects on the preferences for competition of the participants.

Eligibility for the social benefit is tied to a low-performing perception that seems to affect subsequent competitive decisions. Choosing to compete at a lower rate due to being in a low status is consistent with findings in the literature. Specifically, being eligible for an additional government benefit is associated with experiencing poverty or financial scarcity.

Inducing poverty or financial constraints has been found to be detrimental for the cognitive performance of the poor, but not the rich (Mani et al., 2013; Hoff & Walsh, 2018). Furthermore, recent evidence points to lower propensity to choose a challenging task with higher payoffs or experience financial avoidance when facing financial scarcity (Banker, Bhanot, & Deshpande, 2020; Hilbert, Noordewier, & van Dijk, 2022). While we may see evidence of pecuniary emulation in the middle status group in the Control treatment, the introduction of plausible deniability reduces their rate of competition entry. The findings from our study add to this literature focusing on expanding eligibility to the middle group and discovering that being eligible for an additional benefit is tied to lower entry into competition even when controlling for ability on the same task across status levels.

The findings from this controlled setting may be considered for a broader context. Much of the literature focuses on the behavior of those who are high status or are low status, but literature on the group in the middle is sparse. However, this group is the most susceptible when considering policy changes that can affect eligibility into government assistance programs. Recent economic shocks such as recessions and pandemics affect eligibility rules, which generally lowers the barriers to partake in government benefits and expands eligibility (Ganong & Liebman, 2018; on Budget & Priorities, 2022). Frequently, individuals who are eligible for government assistance programs are faced with requirements for job training or providing evidence of a job search to continue qualifying for these programs (on Budget & Priorities, 2022). However, with the findings from this study, we note the importance of considering how the response of being low-income may impact the nature of a job search, particularly how the stigma of being benefit-eligible may impede individuals from seeking more competitive opportunities that can improve their own outcomes.

Further research into this area would explore the underlying mechanisms and motivations for entering competition, particularly when a social status is induced. A field study that captures the essence of the findings in this article could further support our findings and inform policy for individuals who are benefit eligible. Understanding the underlying

behavioral responses stemming from benefit-eligibility stigma may enlighten approaches to end the cycles of poverty traps.

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Appendix

Table 5: Balance Test

| | Control | Plausible Deniability | <i>p</i> -value |
|-----------------------|---------|-----------------------|-----------------|
| Female | 0.59 | 0.54 | 0.397 |
| Year in school | 2.4 | 2.5 | 0.660 |
| Quiz performance | 7.6 | 7.6 | 1 |
| Math task, piece-rate | 9 | 8 | 0.024** |
| Math task, tournament | 10.7 | 10 | 0.137 |

Table 6: Number of groups per group size

| | Overall | Control | Plausible Deniability |
|-----------|---------|---------|-----------------------|
| 6 people | 9 | 1 | 8 |
| 9 people | 14 | 8 | 6 |
| 12 people | 8 | 5 | 3 |

Table 7: OLS Regression on Quiz Score

| | Quiz score | |
|------------------------|----------------|----------------|
| Piece-rate performance | 0.05 (0.03) | |
| Tournament performance | | 0.03 (0.03) |
| Constant | 7.19 (0.32) | 7.30 (0.38) |
| Observations | 276 | 276 |