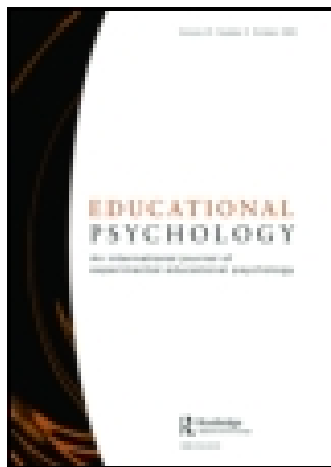


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Stereotype Threat, Identification with Academics, and Withdrawal from School: Why the most successful students of colour might be most likely to withdraw

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Claude Steele's stereotype threat hypothesis posits that when there are negative stereotypes about the intellectual capacity of certain (stigmatised) groups, members of that group suffer aversive consequences; group members who are most strongly identified with the stigmatised domain in question (e.g., intellectual or academic ability) are those most likely to suffer the effects of stereotype threat. In education, it is widely held that personal investment in schooling should lead to more positive outcomes. However, highly-invested individuals will most keenly experience the negative effects of stigma. Thus those most at risk for withdrawing from school among students of colour (who suffer a stigma of intellectual inferiority) could be those most invested in schooling. This hypothesis was tested by measuring identification with academics among a group of incoming students at a racially diverse inner-city high school in the Midwest USA. Regardless of race, the students who most strongly identified with academics (they valued and considered academics central to the self) had higher GPAs, lower levels of absenteeism, and fewer behavioural referrals. However, among students of colour the most strongly identified were more likely to withdraw, while identification with academics did not significantly influence the withdrawal of Caucasian students. These results highlight the importance of providing a supportive environment that diffuses stereotype threat for all students, even those who appear to be academically successful.

Identification with academics is a special case of domain identification (the extent to which an individual defines the self through a role or performance in a particular domain, in this case schooling and academics). The concept of identification with a

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domain is rooted in the symbolic interactionist perspective on self-esteem. Throughout the study of the self, from William James (1890/1981) through Cooley (1902) and Mead (1934) to the present, the symbolic interactionist view of the self has held that: (1) people receive feedback from their environment; (2) this feedback, if attended to, is perceived and interpreted; (3) if this feedback is deemed accurate or valid it is incorporated into the self-concept; and (4) if that domain is central to the self-concept (i.e., an individual is identified with that domain), then the changes in the self-concept will affect an individual's self-esteem (see also Marsh, 1993, 1995; Pelham, 1995a, 1995b; Pelham & Swann, 1989).

According to this model, outcomes in a domain will only affect an individual's global self-esteem to the extent that an individual is identified with that domain. Below, we will develop the argument that identification with academics should be linked to motivation to achieve in that domain. Note that while the focus is on the symbolic interactionist perspective to frame this discussion, this is not the only self-esteem theory that posits academics as a source of self-esteem, nor is this perspective the only perspective that includes the notion that different areas of life can have different levels of relevance to the self (Pelham & Swann, 1989; Rosenberg, 1979; Tesser, 1988).

There are not only individual differences in the extent to which people identify with particular domains, but also intra-individual changes in the extent of identification with particular domains over time (i.e., Rosenberg, 1979). Changing identification with academics appears to be one prominent self-defense mechanism people employ in protecting and maintaining their self-esteem (Crocker & Major, 1989; Tesser, 1988; Tesser & Campbell, 1980). Tesser (1988) and others have reported numerous studies that support the existence of this mechanism in older adolescents and adults, while Harter (1986) detailed the same processes in children (see also Allport, 1943; Crocker & Major, 1989; Epstein, 1973; Greenwald, 1980; Major & Schmader, 1998; Taylor & Brown, 1988).

Although much of the research and discussion in this area examines identification with a domain as an outcome (i.e., examining whether identification with a domain increases or decreases based on the positivity or negativity of the outcomes in that domain) it is possible to view identification with academics as a predictor—that is, to view domain identification as influencing motivation and performance in that domain. Although we will examine identification with academics as antecedent, we explicitly recognise that these processes are most likely iterative and bi-directional (e.g., Osborne, 1997a; Steele, 1997).

Domain Identification and Outcomes in that Domain

Taking a simple operant conditioning point of view, domain identification should be related to motivation and outcomes in that domain. Assuming that a positive self-view is important and rewarding to the self, and that a negative self-view is undesirable, aversive, or punishing to the self (Greenberg et al., 1999; Steele, 1988; Tesser, 1988), individuals should be motivated to behave in ways that maximise the probability of

positive outcomes in domains with which they identify. For students strongly identified with academics, good performance should be rewarding (higher self-esteem, leading to more positive emotions) while poor performance should be punishing (lower self-esteem, leading to negative emotions). For students not identified with academics there should be little motivation to succeed in academics because there is no contingency between academic outcomes and self-esteem—good performance is not intrinsically rewarding, and poor performance is not intrinsically punishing.

There are other motivation perspectives that support (or are consistent with) the link between domain identification and increased motivation in that domain. For example, psychologists have known for years that motivation to achieve in a domain, or to work toward a goal, is a function of the value of the goal and the perceived likelihood of attaining the goal (Atkinson & Feather, 1966; Eccles, 1987). Given the infinite number of areas individuals can expend energy in, areas that individuals strongly identify with are most likely to receive effort and attention. They work toward goals that are meaningful and valuable to them, which will be in domains with which they identify.

In sum, strong domain identification should lead to increased motivation to achieve in that domain and a higher likelihood of positive outcomes, compared to weak domain identification. As the present focus is on identification with academics, a student who values academics and/or views academic performance as an important dimension of the self will be considered, for the purposes of this study, academically identified. If, on the other hand, a student does not value academics as a dimension on which to evaluate the self, that person will be considered not identified with academics.

Evidence for the Link Between Identification with Academics and Academic Outcomes

Management research has long focused on workers' identification with work (the extent to which one defines the self through their work), with the common conclusion being that highly identified workers tend to perform better than less-identified workers (Kanungo, 1979; Rabinowitz & Hall, 1977). In the marriage and family literature (Pasley, Futris, & Skinner, 2002), a father's identification with the fathering role predicts behaviour and outcomes related to fathering, such as involvement in child-related activities. Similarly, the few studies investigating the link between identification with academics and academic outcomes indicate that increasing identification with academics should increase the probability of positive outcomes in that domain.

Osborne (1997a) reported that among community college students, identification with academics prospectively predicted important academic outcomes over a two-year period. Those higher in identification with academics upon starting college had, after two years, significantly higher grade point averages, higher odds of receiving academic honours, and lower odds of receiving adverse academic outcomes (e.g., dismissed for academic reasons, or placed on academic probation). Voelkl (1997) reported that identification with academics was related to academic achievement and classroom participation, and other researchers have reported similar supporting evidence (e.g., Goodenow & Grady, 1993).

The Psychological Dynamics of Withdrawal from School

Early withdrawal from school has been a critical issue for school districts, principals, teachers, parents, and educational researchers for decades. In 1999, the National Center for Educational Statistics (NCES) found that approximately 3.8 million 16–24 year-olds were neither enrolled in high school nor had they earned a high school diploma or GED (graduate equivalency degree). In response to these numbers, numerous studies have examined academic performance and withdrawal from school, with studies reporting that factors such as race, gender, and socio-economic status are strongly related to school withdrawal (Coleman et al., 1966; Irvine, 1999; Miller, 1995; Rumberger & Thomas, 2000).

Some research has shown that engagement behaviours (punctuality, preparedness for class, and effort expenditure on academic tasks) or a lack thereof (absenteeism, truancy, disruptiveness, and delinquency) are each predictive of early withdrawal (Finn & Rock, 1997). Osborne (2004) has theoretically linked these engagement behaviours with identification with academics, creating a comprehensive model linking identification with academics, the behaviours that this motivates, and the outcomes associated with these behaviours. One of the behaviours clearly linked to identification with academics is withdrawal. However, while withdrawal from school may be motivated by a decrease in identification with academics, as Finn (1989) proposed, it is not sufficient, according to Osborne (2004), to motivate withdrawal. In fact, there may be two different scenarios leading to withdrawal.

We start with the assumption that most children begin schooling strongly invested in the process, as authors from Susan Harter (1986) to Claude Steele (1992) have argued, and that healthy individuals are generally motivated to maintain a positive self-image, and use a variety of strategies to achieve this end (Crocker & Major, 1989; Steele, 1997, 1999; Tesser, 1988).

Unfortunately, while most students are motivated to achieve success, not all students do achieve success in academics. As strong identification with academics and poor academic performance are incompatible with a positive self-image (i.e., high self-esteem cannot be maintained in the face of poor outcomes in a highly valued domain), schooling becomes aversive. At this point, one of three things must happen: (1) the student reduces the extent to which they identify with the academic domain, and instead chooses to identify with another domain that can provide the basis for a positive self-view such as delinquent behaviour (e.g., Gold & Mann, 1972; Osborne, 2004) or peer relationships (Osborne, 1997b); (2) the student seeks assistance to improve performance in the domain, eliminating the threat to the self; or (c) the student seeks to escape school through absenteeism or withdrawal (Osborne, 2004). This has been the predominant view in terms of identification with academics and academic success for a while now, particularly as promulgated by the lead author.

However, it is possible that this is not the whole story. A close reading of Claude Steele's various works on stereotype threat presents an interesting wrinkle: the more strongly a student of colour is invested in academics, the more likely that student is to experience stereotype threat (wherein situationally-specific anxiety is significantly

increased due to the effects of the negative group stereotype). In other words, students of colour can be highly identified with academics, and doing well in school, yet the more strongly identified a student of colour is, the more aversive schooling could be, and therefore the more likely they should be to seek to escape the aversive situation, through either disidentification (Osborne, 1995, 1997b) or withdrawal.

Are the Effects of Identification with Academics Affected by Race?

While authors such as Osborne (1997a, 2001) and Voelkl (1996) have argued that identification with academics should be positively related to academic outcomes uniformly, Steele's (1992, 1997) stereotype threat hypothesis argues that negative stereotypes about the intellectual or academic ability of certain populations (i.e., African American, Native American, and Hispanic students) can lead to higher levels of anxiety for members of those groups when compared to students of non-stigmatised groups (i.e., Asian and Caucasian students). An important caveat of Steele's theory, however, is that stereotype threat only affects minority students who are identified with academics. He explicitly proposed that disidentification or, perhaps, early withdrawal from school are ways in which identified minority students can escape an increasingly aversive academic environment.

According to Steele (1997), stereotype threat impacts stigmatised students who are identified with academics in a variety of ways. First, stereotype threat may impact their immediate academic performance (i.e., anxiety increases as they take a test, thus inhibiting performance). However, it is also the case that stereotype threat should not only be a factor when taking tests. To the extent that the stereotype of intellectual inferiority is relevant and salient (as it may be whenever students of colour are in the classroom and under scrutiny), this increased anxiety might become a chronic condition. This chronic anxiety would be experienced as an aversive stimulus, and would prompt these students to seek to escape from the aversive anxiety. Escape is possible via two routes: disidentification and withdrawal. Disidentification will reduce the experienced anxiety levels because academics is no longer a domain central to the self-concept, and according to Steele (1997), identification with the domain is a necessary condition to experience stereotype threat. On the other hand, withdrawal would mitigate the anxiety by removing the student from the situation in which the anxiety is occurring.

Note that Steele suggests that stigmatised students' "susceptibility to this threat derives not from internal doubts about their ability (e.g., their internalization of the stereotype) but from their *identification* with the domain and the resulting concern they have about being stereotyped in it" (Steele, 1997, p. 614). As a result, the stereotype threat hypothesis not only has the potential to explain why minority students tend to under-perform compared to members of other groups on standardised achievement tests (anxiety inhibits optimal cognitive functioning), but also why identified minority students are at risk of dropping out or disidentifying with school. There is a good deal of empirical evidence for the stereotype threat hypothesis in general, as it has been applied to various stigmatised groups. Two good summaries

of this evidence are given in Major and Schmader (1998) and Aronson, Quinn, and Spencer (1998).

In summary, Steele's stereotype threat hypothesis suggests that students of colour are caught in a particularly divisive paradox. Low identification with academics should be generally related to poor academic outcomes, yet more comfort in school. Strong identification with academics should lead to better academic outcomes, but for students of colour, cause the experience of schooling to be particularly aversive. Thus, we hypothesise that identification with academics should generally lead to improved academic outcomes, as noted in other papers (e.g., Osborne, 1997a). However, when looking at withdrawal, we expect a race \times identification interaction, whereby strongly-identified students of colour should be at increased risk of withdrawal from school, whereas strongly-identified Caucasian and Asian-descended students (who are not working under a stigma of inferiority) should be at a decreased risk of withdrawal from school.

Purpose of this Study and Hypotheses

If the above predictions are supported by the data, this study will add to the growing body of stereotype threat research in several specific and important ways.

Primarily, this investigation is the first longitudinal examination of the effects of stereotype threat on withdrawal from school. Prior to this study, stereotype threat has typically been examined via single-administration questionnaires, self-report measures, and/or tests (e.g., Spencer, Steele, & Quinn, 1999). As such, it could be argued that the findings of previous studies merely generalise to the specific task that the student was asked to complete. In others words, previous studies have examined the immediate impact of stereotype threat but have yet to examine any long-term implications. A longitudinal study such as this will provide more detail regarding the mechanisms of academic identification and stereotype threat.

Second, previous studies have utilised samples of students who were enrolled in college and taking college-level coursework (Brown & Josephs, 1999; Osborne, 1997a; Steele & Aronson, 1995), while the present investigation utilised a high school sample.

Third, the current study is the first to test explicitly the link between identification with academics and stereotype threat. In previous studies, identification with academics was often assumed since the sample was derived from a population that had chosen to pursue academics beyond high school. This investigation aims to emphasise the importance of the links between identification with academics, stereotype threat, and academic outcomes, and make explicit the predictive role that the combination may play in student performance (or underperformance).

Finally, the fourth purpose and contribution of this study is to illustrate the heterogeneous nature of students who withdraw from school. As discussed earlier, studies often conclude that students of colour are more likely to withdraw than Caucasian or Asian students (e.g., Irvine, 1999; Miller, 1995). However, our hypotheses argue that it is not all students of colour who will be most at risk for withdrawal, but ironically those most strongly identified with academics.

Method

Sample

In order to test these hypotheses a prospective longitudinal study was initiated in the summer of 1999. Incoming ninth-grade students at a distressed urban high school in the Midwest were asked to complete an identification with academics questionnaire as part of their registration for fall classes. These students were then tracked for two years in order to obtain the relevant data.

The school from which this sample of students was drawn was a racially diverse (Caucasian 33%, African American 39%, Asian 3%, Hispanic 18%, Native American 6%) Midwestern inner-city high school. Students who remained in the school district for the entire study were included in the final sample. Students who had moved, whose locations could not be verified, who had been arrested, or who were otherwise not trackable were removed from the database. Of the 282 students who were part of the incoming freshman class, a total of 131 students had complete data and were included in the analyses (46% of the initial eligible population). Caucasian students comprised 26% of the sample, while African American students accounted for 11%, Hispanic students 57%, and Native American students 6%. Females comprised 63% of the sample, while males accounted for 37%.

Measures

Identification with academics. Levels were measured via the School Perceptions Questionnaire (SPQ; Osborne, 1997a) and the Identification with School Questionnaire (ISQ; Voelkl, 1996), both of which were presented in the packet the students used to register for classes. While both of these measures purport to assess identification with academics, the SPQ explicitly claims to measure the centrality of academics to the self (e.g., "Being a good student is important to me," "I feel good about myself when I get good grades"), whereas the ISQ claims to measure other facets of identification, including belonging (e.g., "I feel comfortable when I am in school, like I belong there," "Teachers don't care about me") and valuing of school (e.g., "School is important in life," "The things we do in class are useless"). All items were measured on a scale of 1 (strongly disagree) to 5 (strongly agree). In a previous validation study (Osborne, 1997a) the SPQ was found to be reliable with a Cronbach's alpha of .82. The ISQ has been found to be reliable with an alpha of .78 (total scale only). In the present study, the SPQ and the ISQ were correlated ($r = .76$), and did not produce differential results of interest. Thus, the two scales were combined, producing a single Identification with Academics (IA) scale with a Cronbach's alpha of .91. Items were averaged to produce total scores.

Withdrawal from school. This was monitored at the end of each of the two academic years. Student records were examined to determine whether the student was

enrolled or not. If students were not enrolled at this school, school district records were examined to determine whether the student had transferred to another school. Students who were registered and attending this particular school or any other school within the large urban school district were considered not to have withdrawn (as were students arrested or transferred due to pregnancy, etc). Any student still residing within the school district but who were not registered with any school was considered to have withdrawn. Of the 34 Caucasian students originally in the sample, 18 (52.9%) had withdrawn; of the 14 African American students, 4 (28.6%) had withdrawn; of the 75 Latino students, 14 (18.7%) had withdrawn; and of the 8 Native American students, 3 (38.5%) had withdrawn.

Academic outcomes. At the end of each school year school records were examined and the following information was recorded for each student: overall GPA, number of days absent from school, and number of times referred to the office for a behavioural problem.

Results

Grades, Absenteeism, and Behavioural Referrals

To examine whether identification with academics (IA) had any effect on grade point average (GPA), simple correlations between IA and GPA were computed (while it would be ideal to have some covariates in these analyses, such as socioeconomic status and prior academic performance, none were available). As predicted, results revealed significant correlations between IA and ninth-grade GPA ($r = .28, p < .002$) and 10th-grade GPA ($r = .25, p < .02$). There were no race or gender interaction effects, nor curvilinear effects, detected.

Also as predicted, there were significant correlations between IA and absenteeism in ninth ($r = -.21, p < .05$) and 10th grade ($r = -.24, p < .05$). Finally, there were significant relationships between IA and behavioural referrals in the ninth grade ($r = -.20, p < .05$) and behavioural referrals in the 10th grade ($r = -.21, p < .05$). As with GPA, there were no race or gender interaction effects, and no curvilinear effects detected.

Similar to the findings of Osborne (1997a), these analyses reveal that higher identification among high school students is related to higher GPA, lower absenteeism, and fewer behavioural referrals. Given the multidetermined nature of these outcomes, these modest correlations are, in our opinion, good evidence that IA does have an influence, as theoretically expected.

Withdrawal from School

The predicted race \times IA interaction is one of the theoretically interesting predictions examined in this paper. To test this hypothesis, a binary logistic regression analysis was performed, predicting complete withdrawal from school (0 = no withdrawal,

1 = withdrew) from race (0 = Caucasian/Asian, 1 = African American/Latino/Native American), IA, and the interaction of race and IA.

The first step in the model (when race and IA were entered) was significant ($\chi^2_{(2)} = 17.56, p < .0001$). The main effect of race was highly significant (odds ratio = 0.11, $p < .0001$), while the main effect of IA was nearly significant (odds ratio = 1.55, $p < .06$). The second step, when the interaction was entered, was also significant ($\chi^2_{(1)} = 3.84, p < .05$). The interaction effect was significant (odds ratio = 2.63, $p < .05$). The results of this analysis are presented in Figure 1.

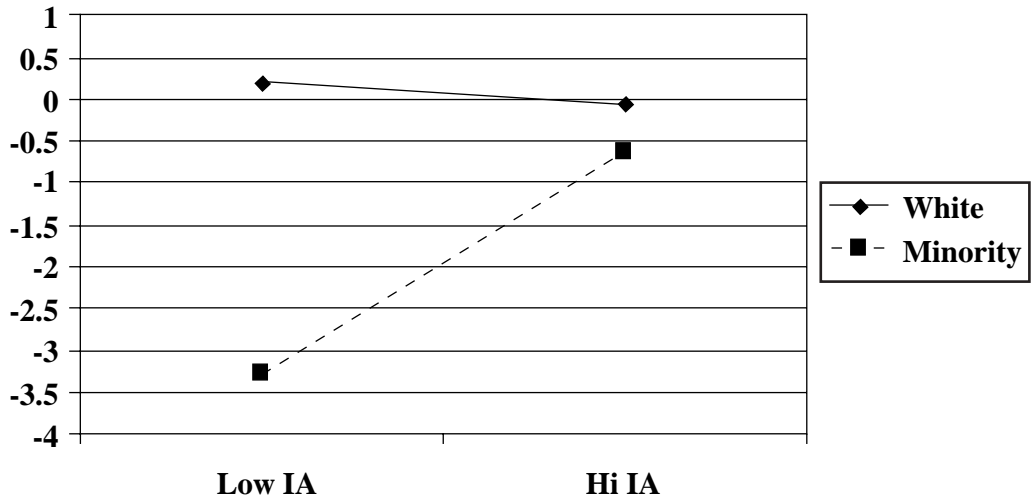


Figure 1. Odds of withdrawal by race and identification with academics

The results of this analysis support the racial paradox prediction derived from Steele's stereotype threat hypothesis—that increasing IA among Caucasian students is associated with decreasing probability of withdrawal, and that the reverse is true for students of colour. As Steele suggested, it is the more highly identified individuals of colour who are more likely to withdraw, as schooling is most aversive for them.

Although this analysis supported the hypothesis presented, the grouping of students by race may potentially obscure important results. Thus, to examine the same hypothesis in more detail, a 2 (dropout status) \times 4 (race) analysis of variance was performed, with the IA variable as the dependent variable. Prior to analysis, the dependent variable was centered by converting to z scores to simplify interpretation. Assumptions of ANOVA were met.

We had predicted an interaction such that students who were members of stigmatised minority groups were more likely to withdraw when they had higher IA, whereas the reverse would be true for students who were not members of stigmatised minority groups. The results of the factorial ANOVA confirmed this prediction. After controlling for GPA, both the main effects of race and withdrawal from school were highly significant (both $p < .001$). However, as Table 1 shows, the interaction hypothesis derived from Claude Steele's writings was also supported ($F[3,118] = 6.08, p < .001$,

partial eta-squared=.13). Specifically, as the means demonstrate, the Caucasian students (not academically stigmatised) who withdrew demonstrated lower IA than those who did not withdraw. However, among students from stigmatised minority groups, those who withdrew from school generally had substantially higher IA than those who did not withdraw.

Table 1. Identification with academics, race, and withdrawal from school

	Not withdrawn	Withdrawn
Caucasian	.001	-.26
African American	.02	.57
Latino	-.02	.33
Native American	-.02	.73

Note. Standardised means (scores converted to *z* scores) reported for identification with academics as a function of race and withdrawal status.

The results of this analysis firmly support the paradoxical prediction derived from domain identification and Steele’s stereotype threat hypothesis—that while Caucasian students with higher IA are less likely to withdraw than Caucasian students with IA, the reverse is true for academically stigmatised minority students. As Steele asserted, it is the more highly identified minority students who are most likely to withdraw, as the academic environment becomes increasingly aversive with each successive year.

Discussion

The first hypothesis we tested was that, in general, identification with academics is predictive of academic outcomes in a prospective longitudinal study of inner-city high school students. Results revealed that students with higher academic identification, regardless of colour, earned higher GPAs, exhibited less absenteeism, and had fewer behavioural referrals than their academically disidentified classmates. Although these results were modest in magnitude, all of these outcomes are heavily multiply determined, and therefore might be more important than the correlations indicate.

Also following predictions, and perhaps more interestingly, identification with academics was found to be differentially predictive of early withdrawal from high school for Caucasian students and for students of colour. Claude Steele’s (1992, 1997) stereotype threat hypothesis argues that academically stigmatised students (generally, students of colour) who are identified with academics should be more likely to withdraw from school because stronger identification makes school a more aversive environment. Our results support this interaction hypothesis. For Caucasian students, withdrawal was associated with lower identification with academics, as Osborne (e.g., 1997) argued. However, for African American, Latino, or Native American students, withdrawal was associated with higher identification with academics.

These findings directly support Steele’s argument that stereotype threat will interact with student domain identification to produce anxiety and an aversive environment.

Although these findings are consistent with theory, they are somewhat frustrating. Steele's writings highlight the way in which being the target of a negative group stereotype (even if one does not believe the stereotype) can make situations aversive when that stereotype is salient. It is common sense that humans seek to withdraw from aversive situations, and there are two methods of accomplishing this—psychological withdrawal (i.e., disidentification; Osborne, 1995, 1997b) or physically withdrawing from the situation (i.e., dropping out of school). The fact that the most dedicated minority students are also the most likely to fall victim to the effects of stereotype threat is a psychological paradox that raises questions about how to encourage students of colour to remain in school.

Students of colour must contend with multiple challenges to retention. Not only are members of intellectually stigmatised groups forced to contend with, and succeed despite, a stigma of inferiority, they also run the risk of losing their peer and possibly their community support network. Authors such as Fordham (1988) and Ogbu (1992) have observed that students of colour, particularly African American students, must often choose between preserving their peer and community support networks and maintaining their academic standing. Thus, not only are academically identified minority students exposed to a more aversive academic environment than their disidentified peers, but these same academically identified minority students also stand to lose the important support networks that often serve to buffer academic stressors.

While it is beyond the scope of this article to compare and contrast strategies for diffusing stereotype threat, there are authors who have discussed ways in which this particular racial paradox might be dealt with appropriately and successfully. Steele (1997) has written about the potential for "inoculating" students of colour and other stigmatised students against stereotype threat. Ogbu (1992, 1997) has argued for teaching students of colour coping strategies specifically designed to allow them to succeed in school without having to give up their racial identities and, consequently, their community support networks.

Caveats and Directions for Future Research

As with any study, there are issues that readers must attend to when interpreting these results.

First, we had no measures of background variables, such as socioeconomic status or academic achievement prior to the ninth grade, making it impossible for us to control for background in our analyses. However, as these variables tend to add error variance to these types of analysis, we believe that the ability to partial out these variables would have clarified and strengthened these results. In these analyses, individual differences are mostly error variance. We were able to control for current academic performance in the withdrawal analyses, which helps somewhat. Further studies with better measurement of background variables and preparation are required.

Second, we were careful to note that students had withdrawn from school as opposed to dropped out of school. This is important because we were unable to prove definitively that students had truly dropped out of school completely. While we did

eliminate students who graduated early, who had been arrested, who had been transferred to special schools due to pregnancy, and who had moved outside the school district, it is theoretically possible that some students who stopped attending school and who did not meet the other requirements did something other than drop out. It is possible that students who appeared to drop out were transferred or reassigned to different schools without a record of that having happened. It is possible that other events may have resulted in a student looking like a drop-out, such as a name change through adoption or marriage. None of these are likely, but they are possible.

It should be noted, however, that after withdrawing from the high school used in this study, the students were not registered at any of the other eight high schools in the district. Furthermore, in a report published by the state's Office of Accountability, the high school in which these students were enrolled reported a drop-out rate of 12.1%, which is four times greater than the state average and twice that of other schools in the district. This makes it unlikely that these students left school and matriculated into a college, for example.

Third, it could also be argued that pregnancy or other non-academically related factors (such as having to get a job to support a family) may have prompted withdrawal from school, and thus that the stigmatised academic environment does not account for early withdrawal. However, this line of reasoning still fails to answer the question of why academically identified minority students were found to withdraw at a higher rate than their non-identified minority classmates.

Fourth, this was a relatively small sample of students. It would be desirable to obtain a much larger sample to test these hypotheses more fully, particularly from several diverse schools or areas to get a sample that is more representative of the population of public school children.

Fifth, while in the present article we primarily discuss the effect of identification with academics on academic outcomes, there is also good reason to assume that this is a circular relationship (as discussed above). Research shows that the level of identification with a domain responds readily to outcomes in that domain (e.g., Tesser & Campbell, 1980), just as we argue that outcomes in a domain respond to the level of individual identification.

Finally, contrasting this study with Osborne's earlier studies (e.g., 1995, 1997b), it is interesting to note that there are different possible reactions to this stereotype threat for stigmatised youth—physical withdrawal, psychological withdrawal, or perseverance and resilience in the face of the aversiveness. However, no study on stereotype threat has looked at the interesting issue of what predicts which path a particular student will follow—dropping out, disidentification, or resilience. While it is easy to speculate about factors that could influence the path, research is desperately needed to illuminate these issues.

Conclusion

The challenge has historically been for school administrators, teachers, and parents to compel their students and/or children to adjust their perceptions so that school

remains a viable option through which they will be able to affirm the self. This is an important concept for several reasons, the most important of which may be that susceptibility to stereotype threat, like the concept of domain identification, may be fairly malleable.

However, simply telling students that they have the ability to succeed without clear opportunity or models of success is insufficient. In fact, several theorists have argued that it can only be through independent performance and success that any student, independent of race, can overcome the myriad hurdles they are sure to face during their academic careers. Bandura has argued that performance accomplishments will produce higher, more generalised, and stronger efficacy expectations for individual students (Bandura, 1977, 1982). What seems to be the guiding principle is that, for success to occur in an identified minority student population, the perception must exist that academic success is a viable option and does not carry with it the implied notion of preordained failure that is made explicit in stereotype threat.

As this study indicates, stigmatised minority groups feel first-hand the impact of negative stereotypes and, in some cases, must decide whether or not to risk confirming them or appearing as possibly just the exception to the rule. With few models of success to mirror, the challenge for academically identified minority students can seem a daunting one indeed.

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