Long-term Implications of Adolescent Activity Involvement and Identity

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Developmental Science of Adolescence
Most empirical effort focused on troubled youth
articulate about what can go wrong
burgeoning field of developmental psychopathology
research-based programming targets drug use, suicide, violence, and sex
No comparable field for what can go right

Why focus on promoting positive development?
many adolescents are bored and unmotivated
disconnection from meaningful challenge = absence of engagement in positive life path
many teens do homework, comply with parents and get through the day, but have no
investment in exciting future (Larson, 1998)
how do we get adolescents excited and invested?
no well developed body of relevant theory and research for this

Why Activity Involvement?
One possible forum for development of positive characteristics: initiative and
ingagement
Constructive organised activities (require effort, express talents) vs. relaxed leisure
(enjoyable but not demanding)
Possible developmental benefits:
  contribute to community (Youniss and civic engagement)
  belong to valued group (integrated into adult-sponsored culture)
  establish supportive networks of adults and peers (facilitate need for social
  relatedness)
  provide challenging setting (expressions of talent outside academics; also challenge
  beliefs – like soup kitchen volunteer work)

Evidence for Benefits – Activity involvement clearly linked to positive development
Otto (1970’s) found a link between activities and later educational attainment, occupational status, and income

Mahoney & Cairns (1996) showed that involvement in activities lowered the chances of school dropout and criminal offending, especially for high risk youth

Barber & Eccles (1997) found that total number of activities and diversity of involvement predicted better grades, attachment to school, and later college attendance

Why Focus on Peer Crowd Identification?

Adolescents were cognitively organizing and navigating their social world long before social scientists began measuring crowd identification, and before Hollywood began reflecting and exploiting it in such classic movies as "The Outsiders," "Pretty in Pink," "The Heathers," and the more recent "The Faculty." Our analyses presented today utilize one such movie that caught the imagination of adolescents even as it reflected the darker realities and anxieties of adolescent life. "The Breakfast Club" was a prominent film when our study participants were in the 10th grade. Sadly, we believe that recent secondary school tragedies suggest that revisiting the ground examined in this portion of our research is timely despite the fact that our identity groups are based on a movie that came out in the 1980’s. We believe further, that the theme of adolescent peer group stereotypes is not a passing and sophomoric whimsy that adults can afford to dismiss. Instead, we would suggest that the emergence of "crowds," reputation-based peer groups such as "punks," "gearheads," and "druggies," reflects adolescents' efforts to systematize and deal with their social contexts at a time characterized by burgeoning social cognitive skills that enable access to (and felt need for) culturally-shared social representations as a tool to mediate socio-emotional experience (Brown, 1990; Stone & Brown, 1999).

They may be an example of adaptive practices that function so importantly as buffers to protect internal organization from environmental disturbance that they have
been encoded in cultural representation (Sameroff & Suomi, 1996). Through norms generated within crowds, adolescents gain the advantage of asserting preferred identity and life-style options that have been socially constructed and “consensually validated” in the context of relationships rather than in individual rumination (Youniss & Smollar, 1985).

--Provides opportunity to explore and express identity options
-- Validation of values and interests
--Membership in crowds synergistically structures the friendships and activities that characterize different pathways through adolescence (Eccles & Barber, 1999).
--Crowd identity clusterings may interact with peer microcontexts (friendship networks) to channel and constrain behavioral variation (Gottlieb, 1991) across adolescents' social milieux and across time.

Evidence that specific types of activities and social identity matter
Eccles & Barber (1999) showed different patterns of outcomes, depending on the type of activity the adolescent was involved in and their social identity group:

The “Criminals” were not generally engaged in organized extracurricular activities, and had the highest proportion of friends who drank and used drugs. The “Jocks” were most involved in Team Sports, and the “Princesses” reported high rates of School Involvement.

Involvement in prosocial activities, like having a “Brain” identity, was associated with lower levels of risk behavior and positive academic outcomes. These adolescents had the most academically-oriented peers.

Involvement in sports and school spirit activities (like being a “jock” or a “princess”) lead to a mixed picture, with positive academic outcomes, but also higher levels of risk
behavior. These adolescents had academically-oriented peers. However, these two groups also had a high proportion of friends who drank.

So – what about the long-term pathways of these groups…?

The focus of this paper is on the long-term risk and adjustment patterns associated with activity and identity choices in adolescence. We examine risk behavior such as substance use, instrumental behavior related to education and work roles, and psychological adjustment.

Method and Analyses

Participants were from the Michigan Study of Adolescent Life Transitions (MSALT). Longitudinal survey and school record data from approximately 900 MSALT participants at Waves 5, 6, 7, and 8 are included in these analyses, and were collected at tenth grade, twelfth grade, and two and six years after high school, respectively. The participants were asked in the tenth grade (Wave 5) to make a prototype judgment regarding their identity: “Which character in the movie ‘The Breakfast Club’ is most like you?” (Frequencies are shown in Drawing 1.)

Part I – Activity Involvement and Substance Use Patterns/Instrumental Behaviors

Analyses were conducted to examine cross-time patterns of substance use. A 2 (gender) X 2 (Activity participation) repeated measure MANOVA was performed for each dependent variable, nesting the 4-level “time” component within subjects. Table 1 and Figures 1-14 summarize between and within subjects effects revealed by these analyses. Tables 2 - 6 summarize means, standard deviations, and n’s for substance use. Appendix A summarizes the adjustment and substance use items employed in the study.

Normative Patterns Across time
**Drinking.** Significant upward linear and quadratic effects of time indicate that alcohol use continues to increase across time, but that the rate of increase attenuates as participants get older. Females report drinking less frequently than males overall, though rates do not differ at Time 1. The linear trend component of the data is moderated by a gender effect, males exhibiting a more persistent pattern of increase, while females clearly change trajectory between ages 21 and 24 (see Table 1 and Figure 1).

**Getting Drunk.** Analyses revealed a significant quadratic effect of time. Though frequency of getting drunk increases between age 18 and age 21, it decreases between age 18 and 21. The linear time component in the data is moderated by gender, with females being responsible for the overall decrease in frequency of getting drunk over time (see Figure 2).

**Marijuana Use.** Linear and quadratic effects of time were revealed in the frequency of marijuana use. Though marijuana use increases in frequency overall across time, the upward trajectory clearly attenuates with each successive wave. Gender does not significantly affect the polynomial trends, nor do marijuana use rates differ by gender overall (See Figure 3).

**Prosocial Activities Participation**

**Drinking.** A between subject main effect for participation revealed that participation in prosocial activities at Grade 10 has a significant effect on overall drinking levels, holding time constant (see Figure 4). Those who participate in prosocial activities drink significantly less frequently than those who do not. The linear and cubic effects of time on drinking are both moderated by participation in prosocial activities. Essentially, participation in prosocial activities is associated with a delay in the normative increase in drinking. Thus, the rate of drinking rises more between ages 16 and 18 for non-participants than for participants, and rises more for participants than for participants between ages 18 and 21. Interestingly, between ages 21 and 24, the
rates of increase for participants and non-participants are parallel.

**Getting drunk.** Again, prosocial activities participation at Grade 10 has a significant effect on risk behavior, as revealed by a between subject main effect for participation; participants get drunk less frequently than non-participants (see Figure 5). The downward linear time-trend is moderated by prosocial activities participation. Non-participants report reducing relatively high levels of getting drunk between age 18 and 24, while those involved in prosocial activities at age 16 report an increase from low levels to more moderate levels.

**Marijuana use.** A between subject main effect for participation at Grade 10 revealed that prosocial activities participants use marijuana at significantly lower rates than non-participants (see Figure 6). However, the significant upward linear trend and the significant quadratic leveling off trend do not differ by participation status.

**Smoking.** Those who participated in prosocial activities were less likely at age 24 to report ever having smoked than those who did not participate.

**Sports Team Participation**

**Drinking.** A between subject main effect for participation revealed that participation in team sports has a significant effect on overall drinking levels, holding time constant. Athletes drink more frequently than non-athletes (see Figure 7). A gender by sports interaction moderates the upward linear trend. Females who have participated in team sports increase their frequency of drinking at a faster rate than non-athlete females between Age 16 and 21 and thus increase the difference between their rate of drinking and that of non-athlete females. Between 21 and 24, however, female athletes level off in parallel with female non-athletes. Conversely, male athletes increase their drinking at a lower rate than non-athletes do and thus reduce the gap between themselves and non-athletes across time.

**Getting drunk.** A between subject main effect for participation revealed that participation in team sports has a significant effect on overall frequency of getting drunk, holding time constant. Athletes report getting drunk more often than non-
athletes (see Figure 8). The normative quadratic trend across time and gender difference are not influenced by participation in team sports.

**Marijuana use.** Participation in team sports moderates the cubic trend component in the data. For athletes, the linear trend upward between age 16 and age 18 is steeper than for non-athletes. However, the rate of increase in frequency of marijuana use between age 18 and age 21 is lower for athletes, so that at age 21, non-athletes use marijuana considerably more often than athletes. At age 24 rates of usage between athletes and non-athletes have converged. Non-athletes have decreased in frequency of reported marijuana use while the athletes have continued the slow rate of increase that they established at age 18.

**Smoking.** Sport participation in tenth grade also predicted lower likelihood of having ever smoked, with 32.5% of athletes and 45.5% of non-athletes reporting a smoking history. Detailed examination of the frequencies indicated the protective role of sports applied only to males, with 30% of male athletes and 54% of male non-athletes smoking (the rates for females were 35% and 42% respectively).

**Performing Arts Participation (this will be left out of talk)**

**Drinking.** The normative upward linear trend in frequency of drinking is influenced by participation in performing arts. The cubic component in the data is moderated by performing arts participation and by an interaction of gender and performing arts. Inspection of Figure 10 reveals a slight cubic S-shape, and reveals as well that this cubic element in the data can be attributed to male performing arts participants. Those who were performers in 10th grade (especially males) reported an especially precipitous increase in drinking between age 18 and age 21.

**Getting drunk.** The linear and quadratic components in trajectory across time for frequency of getting drunk are moderated by a gender/performing arts interaction. For female performing arts participants, there is no change in frequency of getting drunk across time (see Figure 11). For female non-performers, there is a decrease between age 21 and age 24. The pattern is quite different for males, who exhibit an
exaggeration of the normative quadratic effect. Male performers drink less than non-performing males at age 18 and 24 but not at age 21. This is the result of a relatively precipitous increase between 18 and 21 and a relatively precipitous decrease between age 21 and age.

**Marijuana use.** A gender by performing arts interaction moderates the cubic trend component in the data regarding frequency of marijuana use (see Figure 12). Female performing arts participants exhibit a pattern very much in line with the normative upward linear trend and the normative quadratic leveling off trend. Female non-performers exhibit a relatively high peak at age 21 and a relatively precipitous tapering off between age 21 and age 24.

**School Involvement**

**Drinking.** Participation in school-related clubs, and non-athletic activities at Grade 10 was not related to drinking frequency overall or to patterns of drinking frequency across time.

**Getting drunk.** A gender by activities interaction moderates frequency of getting drunk (see Figure 13). Females who participated in school-related clubs at Grade 10 get drunk more often than females who had not participated in these organizations. However, among males it is those who had not been involved with school related organizations who get drunk more frequently.

**Marijuana use.** Frequency of marijuana use is moderated by a gender by school involvement interaction (see Figure 14). Females who did not participate in school-related clubs at Grade 10 use marijuana at rates quite similar to those who did not participate through age 18, but their rate of increase between age 18 and 21 is considerably steeper than males and female non-participants. This gap is maintained through age 24.

**Smoking.** A similar gender difference in school involvement effects indicates that involved males are less likely to report ever smoking than non-involved males, but there is no involvement difference for females.
In this group, we speculate there is a different kind of school involvement depending on one’s gender. We have collapsed pep club and student government together for this activity category (to represent attachment to and promotion of the school culture/mission). We may be unknowingly contrasting the effect of being a student body leader for a boy with being in pep club and hanging around with partying football players for a girl.

**Academic Clubs**

Consistent with our previous work, academic club participation at Grade 10 was not significantly related to patterns of substance use across the years.

**Instrumental roles and activity involvement**

In addition to substance use, we examined a number of young adult characteristics of those involved in activities in high school, including number of years of education completed by age 24, the amount of autonomy the participants reported in their jobs, whether they perceive their jobs to be long-term (have a future) vs. a short term job (plan to do something different in the future). Regression analyses were used with activity involvement and gender as predictors, as well as high school math and verbal ability, and mother’s education. All activity types predicted more years of education completed, with the exception of prosocial activities. Only sports participation in 10th grade was positively related to reporting you had a job with a future at age 24. Similarly, sports predicted having more job autonomy at age 24, and an interaction indicated this effect was present for females but not males.

**Conclusion for activity involvement**
Participation in high school activities continues to be an important predictor of later substance use and instrumental roles. A pattern similar to that shown in our earlier work with the data from age 21 suggests that participating in prosocial activities in tenth grade continues to offer protection from substance use eight years later, but offers no advantage with regard to instrumental behavior. On the other hand, tenth grade athletes report the most positive instrumental roles eight years later (more education, more job autonomy, and jobs with future prospects), and at the same time they are still drinking/getting drunk at higher rates than non-athletes. Interestingly, their substance use in the areas of smoking cigarettes or marijuana is lower than that of non-athletes. Again, we suggest that drinking may need to be examined with a more differential view – considering the context in which one is drinking, as well as the psychological well-being of the drinker. Our interest in the mechanisms by which activity involvement might be related to these differences in young adulthood leads us to consider the meaning attached to participation through its link to a social identity.

Part II – Identity Group

Analyses were conducted to examine cross-time patterns of substance use and adjustment. A 2 (gender) X 5 (Breakfast Club Identity) repeated measure MANOVA was performed for each dependent variable, nesting the 4-level “time” component within subjects. Table 1 and Figures 1-7 summarize between and within subjects effects revealed by these analyses. Tables 2 and 3 summarize means, standard deviations, and n’s for each outcome.

Substance Use Pathways

1. Drinking. Overall drinking levels differ by identity group. Significant linear and quadratic effects of time indicate that alcohol use continues to increase across time, but that the rate of increase attenuates as participants get older (see Table 1 and Figure 1). Both the linear increase and the “levelling off” of the rate of alcohol usage are, however, moderated by an interactive effect of gender and identity. For instance,
female basket-cases and jocks moderate their drinking more than their male counterparts while brains of both genders continue with a linear increase. Though female “criminals” do not follow the levelling off pattern that male criminals do, small cell-sizes suggest caution in interpreting results regarding female “criminals” and male “princesses”. Consistent with other research, the numbers of males and females with non-traditional identities were not proportional to their opposite-sex counterparts in the original sample. In this longitudinal sample, the cell-sizes are understandably diminished further.

2. **Getting Drunk.** Identity groups and gender groups differ in levels of getting drunk overall. A quadratic “leveling off” pattern is revealed. Though getting drunk increases between ages 18 and 21, it is leveling off by age 24 among our participants. The linear increase component in the data is moderated by an interactive effect of gender and identity. For example, female and male brains increase their frequency of getting drunk in the years following high school, but it is only male brains that moderate this behavior after age 21. Criminals of both genders give no sign of reducing the frequency of getting drunk. (Note that this item did not appear in the Wave 5 questionnaire.)

3. **Marijuana Use.** Identity group and gender independently and interactively affect marijuana use overall. Time, as well, has a significant effect. The linear trend is moderated by gender, by identity group (at the trend level), and by a gender/identity interaction. Female participants begin at a level commensurate with the males, but they do not increase their usage in early adulthood. Basket-cases increase their frequency of marijuana usage in early adulthood, while the trajectory of princesses involves a temporary increase in usage followed by a return to a relatively low rate.

4. **Smoking.** The Chi-squared statistic for identity and smoking history is significant, with Criminals (77%) and Basket-cases (56%) being most likely to report having ever smoked and Brains (26%) and Jocks (28%) are least likely. Princesses fall in the middle (40%).
Adjustment Pathways

5. Depressed mood. Overall depressed mood levels differ by identity group. Significant linear, quadratic, and cubic contrasts reveal that depressed mood levels decrease over time, but that this decrease is moderated by a leveling off at Wave 7 (age 21). The downward linear effect is moderated by gender. Females experience a more dramatic reduction in depressed mood than do males.

6. Worry. Worry levels differ overall among identity groups. Time exerts a significant linear and cubic effect. Worry abates after age 16, rises to a peak at 21 and then declines thereafter. Interestingly, this peak and attenuation occurs for all identity and gender groups. The strength and universality of the cubic effect compelled follow-up analyses to ascertain whether certain ecological niches were more or less characterized by worry at age 21. Intriguingly, no significant differences in worry trajectories were found for any of the categories we compared: college student status, relationship status, parenthood, or on-time college graduation. Additionally the effect did not differ significantly for gender groups within these niches.


8. Self-esteem. Self-esteem levels differ by identity group. While levels of self-esteem rise across time, there is a significant leveling off of this trend in the early adult period.

Adjustment point indicators

Suicide attempts. Basket-cases were the most likely to report having tried suicide by age 24 (14%), with criminals close behind (12%). Brains (3%) and Jocks (6%) reported the lowest rates.

Psychologist visits. Jocks (6%) were least likely to report a psychologist visit by age 24. Basket-cases were most likely to report having seen a psychologist (25%), followed by Princesses (21%), Criminals (20%), and Brains (18%).
Instrumental roles and identity

Brains are the most likely to have graduated from college by age 24 (55%), followed by Basket-cases (44%) and Princesses (41%). Criminals are least likely to have graduated (22%). Interestingly, Jocks (34%) are well below the Brains. This is in contrast to the data we reported on sports participation (linked to more years of school completed), and suggests that while the activity itself may offer some benefit related to college attendance, the identity of being a jock does not.

Conclusions for identity analyses

Breakfast Club Identity choices were frequently predictive of longitudinal patterns in substance use and mental health domains. Variations in patterns across adolescence and young adulthood were associated with gender and Breakfast Club Identity as main effects and in interactive effects as well. Normative trends in development are experienced differently by individuals depending upon their self-nominated position within the social milieu.

The current study suggests that crowd identity effects extend well beyond adolescence. It would not be appropriate to suggest that our novel measure of identity is analogous either to in-depth measures of the self nor to measures in studies dedicated to the peer crowd phenomenon. However, the predictive power of our construct over an expanse of 8 years suggests that we have tapped something important—perhaps a perceptual construct through which adolescents encode, by way of social construction, pervasive matters of personal choice and agency.

We are also interested in the developmental pattern that emerged in Worry. The increasing concerns about the future reported by our participants when they were 21 years old cut across college status, gender, partnership status and parenthood. There were mean level differences, but not differences in change over time. This pattern needs to be examined more fully, and we look forward to comparing our pattern to
similar data from the BIJU study conducted at the Max Planck Institute in Germany, where important decisions about life paths are often made earlier than they are in the US, thus perhaps relieving some of the anxieties we see at 21.