

† 19 COMMUNITY CORRELATES OF ADOLESCENT RISK-TAKING IN A SEMIRURAL COUNTY. Kathaleen C. Perkins, (Spon. by Elizabeth R. McAnarney). Oswego, New York

This descriptive analysis related demographic characteristics of communities to adolescents' (ages 14-20 yrs.) risk-taking behaviors - namely, MVA, pregnancies, and felony arrests. Demographic data from the 1980 census included low rent housing (% housing units rented for less than \$149/mo.); poverty (% families below the poverty level); family disruption (families headed by a female with children under age 18); college educated adults (% adults over age 25 who have completed 4 yrs. of college); liquor popularity (the number of liquor licenses per population over age 18). Data on 5 risk-taking behaviors summed over a 4 yr. period were obtained from the NYS Health Dept. and local agencies: % males and females who had accidents while driving (MVA); pregnancies in 2 age groups under 17 and 17-19, and youth ages 16-20 arrested for felonies. Relationships are displayed by Statistical Analysis System (SAS) color graphics. Family disorganization and liquor popularity correlate with 4 of 5 risks studied; low rent housing with 3 of the 5 ($p < 0.01$). The negative effect of college educated adults was seen with only 1 of the 4 risks. Likewise, poverty did not appear as important as anticipated as it did not correlate with female-headed families nor with 4 of the 5 risks studied. Adolescent risk-taking behaviors are inter-correlated ($p < 0.01$) but the incidence is not solely related to urbanization or adolescent population densities, since felonies and pregnancies of females in the younger age group are markedly less in the larger of the cities ($p < 0.01$). The relationships displayed have been used to promote community responsibility.

20 IRON DEFICIENCY AMONG INCARCERATED JUVENILE DELINQUENTS. Gerald M. Rosen, Amos S. Deinard, Samuel Schwartz. University of Minnesota and Hennepin County Medical Center, Department of Pediatrics Minneapolis.

A population of 163 incarcerated delinquents, 126 males and 37 females ages 12-18 years, was studied to determine the prevalence of iron deficiency; and to compare Hgb, MCV, SF, and EP/Hgb as predictors of response to iron therapy. Thirty-two percent of females and 6% of males had $SF \leq 12$ ng/ml; 51% of females and 24% of males had $SF \leq 20$ ng/ml. The mean SF was 17.7 ng/ml for females and 29.2 ng/ml for males. Of the 163 subjects, 53 were at risk for iron deficiency based on SF, Hgb, EP/Hgb, or MCV criteria. Twenty-one completed treatment with iron and 9 had a greater than 1 gm rise in Hgb. The following tests identified responders: $SF \leq 12$ ng/ml - 5/9; $SF \leq 20$ ng/ml - 9/9; Hgb ≤ 3 rd percentile - 4/9; Hgb ≤ 10 th percentile - 7/9; MCV ≤ 10 th percentile - 2/9; EP/Hgb ≥ 3.0 ug/gm Hgb - 2/9; EP/Hgb ≥ 2.5 ug/gm Hgb - 4/9. $SF \leq 20$ ng/ml had a false positive rate of 57%. Hgb ≤ 10 th percentile and EP/Hgb ≥ 2.5 ug/gm Hgb had no false positives.

Iron deficiency and iron responsive anemia are common problems among incarcerated juvenile delinquents, particularly among women and Native Americans of both sexes. $SF \leq 20$ ng/ml offers the most sensitive screening test for detecting iron responsive anemia, but has poor specificity. Hgb ≤ 10 th percentile is an alternative screening test which is more available, less expensive, nearly as sensitive, and more specific. EP/Hgb ≥ 2.5 ug/gm Hgb, MCV ≤ 10 th percentile, $SF \leq 12$ ng/ml, and Hgb ≤ 3 rd percentile did not prove to be good screening tests because of poor sensitivity.

† 21 USEFULNESS OF URINARY 6 β -HYDROXYCORTISOL (6 β OHF) EXCRETION IN THE DIAGNOSIS OF CUSHING'S SYNDROME. P. Saenger, R.E. Peterson, Dept. Peds., Montefiore Med. Ctr., Dept. Med., Cornell Univ. Med. Coll., New York.

Rapid and simple laboratory diagnosis of cortisol excess due to Cushing's syndrome is highly desirable. To date chronic overproduction of cortisol and loss of diurnal cortisol variation are considered to be the most consistent metabolic abnormalities in Cushing's syndrome. Nonetheless free urinary cortisol (F) and plasma cortisol levels may yield false negative results. We therefore applied a recently developed RIA for 6 β OHF. 6 β OHF is the major unconjugated urinary metabolite of cortisol. In the evaluation of 33 adolescents and young adults for Cushing's syndrome near normal 17OH corticosteroids (<14mg/24h) and/or F (<120 μ g/24 h) were found in 6 patients. 6 β OHF was at least 10 times above nl in all 33 patients (mean: 8.11mg/24 \pm 2.01(SE)mg/24h vs nl 0.4 \pm 0.1 mg/24h). The ratio of 6 β OHF/F was also markedly elevated (mean 14.8 \pm 3.3; vs nl 6.7 \pm 1). The highest 6 β OHF excretion was seen in patients with ectopic ACTH production and adrenal cancer (35 and 75mg/24 hr respectively). The data show that 6 β OHF is a rapid and reliable test for hypercortisolemia due to Cushing's syndrome. 6 β OHF proved to discriminate better than either 17OH corticosteroids or F; no false negative or positive cases were seen in the present series. Our data suggest further that excess ACTH indirectly and cortisol directly induce 6 β -hydroxylase activity causing highly diagnostic increases in 6 β OHF excretion. Measurement of urinary 6 β OHF is therefore suggested as a new, clinically useful test in the evaluation of hypercortisolemic states in adolescence.

22 THE TEENAGE PELVIC EXAM: THE RELATIONSHIPS OF ATTITUDES, KNOWLEDGE AND SELF-ESTEEM. Deborah C. Stewart, Cynthia Mervis and John Goldenring (spon. by John D. Madden).

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Two hundred ninety-nine female adolescent patients ages 11-22 at three Los Angeles area clinics were studied to determine the relationship between knowledge of their bodies, gynecological history, self-esteem and attitude toward the pelvic exam. The population was 75% black, 16% hispanic, 7% white. Patients came from medical, family planning or teen prenatal clinics. The Texas Social Behavior Inventory was used as a measure of self-esteem. A positive attitude toward pelvic exams was associated with higher levels of both knowledge ($p = .0003$) and self-esteem ($p = .039$). However, a small group emerged with high self-esteem and good knowledge who nevertheless had a poor attitude toward pelvic exams. The origin of this paradox is unclear. Physician and parent explanations about the pelvic exam produced significantly better knowledge scores (paired T-test $p < .05$) than explanations by other health professionals or friends. High knowledge scores were significantly associated with tampon use, contraceptive usage or receipt of health education.

23 RISKS OF ABNORMAL GLUCOSE TOLERANCE IN TEENAGE PREGNANCY. Ann M. Truscello, Marianne E. Felice, Paul Shragg, Dorothy R. Hollingsworth (Spon. by William L. Nyhan). Univ. of Cal., San Diego, UCSD Med. Center. Depts. of Pediatrics and Reproductive Medicine, La Jolla, CA. 92093.

Routine screening for gestational diabetes (GDM) is recommended for all pregnant women, but is unusual in clinics for adolescents. We performed a 50 g glucola loading test in 138 patients age 12-18 years at 24-34 weeks gestation. A 1h plasma glucose ≥ 150 mg/dl was an indication for a 3h OGTT. The study group was multiracial (38% Hispanic, 32% White, 22% Black and 8% other). Results: Mean 1h plasma glucose value for all patients was 103 mg/dl \pm SD 22. 94 (68%) teenagers were ± 1 SD of the mean while 21 (15%) were > 1 SD below and 23 (17%) were > 1 SD above the mean. GDM was confirmed in 2 girls (1.5%). Both gained excessive weight, had preeclampsia, large placentas and macrosomic infants. Girls with a 1h glucose > 1 SD below the mean (< 82 mg/dl) had a lower Body Mass Index (BMI: Wt/Ht²; $p < 0.01$) and more of their infants had fetal distress ($p < 0.01$). BMI was not correlated with 1h glucose levels. Although 5 infants weighed > 4000 g, three had mothers with a 1h glucose ≥ 2 SD below the mean while 2 others had levels > 2 SD above the mean. Frequency distribution curves for 1h glucose values differed markedly in the four racial groups. The mostly Indochinese group had significantly lower 1h glucose levels than all other groups ($p < 0.008$). Conclusions: All pregnant teenagers should be screened for GDM because this problem occurs in young as well as older women. Higher perinatal morbidity occurs in infants of mothers with low as well as high plasma glucose values.

24 IS THERE A CULTURE OF CORPORAL PUNISHMENT AMONG ADOLESCENTS? Susan C. Weller, Donald P. Orr, Univ. of PA, Indiana Univ., Indpls, IN (Spon. by M. Green)

Increased acceptance of violent or abusive disciplinary measures has been argued to support the increased prevalence of reports of child abuse among ethnic minorities. To identify whether previous experience with physical punishment or discipline is related to the acceptance of such measures, high school students of Anglo and Hispanic backgrounds were studied. Preliminary indepth interviews identified disciplinary items. Sentence substitution was used to compare teenage misbehaviors with possible adult responses to those behaviors and independently replicated in two multi-ethnic high schools. 178 students (56% Anglo) participated; 11% felt severely punished, 26% had been punished physically, 14% had been struck in the past six months. No statistically significant differences in the prevalence of reports were noted between Anglo and Hispanic. Adolescents viewed physical punishment as unacceptable. There was a tendency for physically punished students to report physical punishment as more appropriate. Response patterns were analyzed for individual deviations from the majority using the Quadratic Assignment Program. Anglos and Hispanics did not have different beliefs about the appropriateness of discipline ($p < .05$). Responses of those not originally reporting physical punishment were different from those who had ($p < .05$). The physically punished youth did not agree with each other ($p < .05$). These findings contradict the notion that there is a coherent subculture of corporal punishment. The relationship to abuse is unclear.