Several research studies have been conducted in the United Kingdom regarding the effect of controversy on vaccine acceptance, but few have explored the issue in the United States. As fears of links between vaccination and autism begin to take root, the decision to vaccinate may become increasingly difficult for many parents and in preparation for parents’ pending concern, healthcare providers need to thoroughly understand the factors influencing parents’ intention to vaccinate.

Methods

Convenience sample of parents of children with autism (n=20) (Table 1) were obtained from the Autism Centers of Excellence. The sample was limited to parents who had been involved in vaccine-related issues with their child. Two self-administered cross-sectional surveys representing (a) attitudes toward childhood vaccines and (b) perception of medical care were developed based on modifications of previously developed surveys (Casiday, Cresswell, Wilson, and Panten-Brick, 2006) and (Marshall and Hays, 1994; Street, 1991), respectively. Both surveys were comprised of 4-point Likert scale items ranging from strongly agree to strongly disagree (Table 2).

Responses to the following three outcome questions were dichotomized (1=strongly agree/agree; 0=strongly disagree/disagree)

- “Vaccines contributed to the cause of my child’s autism.”
- “I would recommend to others not to vaccinate their children.”
- “If there were no penalties for doing so, I would refuse to vaccinate my children.”

The relationship between parent ratings and child and parent demographic characteristics were assessed. Subscales within the Parent Satisfaction with Care Scale and the Vaccine Acceptance Scale were also assessed as correlates (Table 3). Exposure to anti-vaccine media was assessed through consecutive affirmative responses to two questions: “Have you encountered information on [MEDIA TYPE] about links between vaccines and autism? Did the information increase your fears regarding vaccines and autism?” These questions were asked for six different media types (i.e., internet, magazines, newspapers, etc) and the sum of affirmative responses was used as a covariate in analyses.

Subscale scores were calculated as a summation of item scores. The mean subscale score was imputed for missing item values when necessary. Bivariate associations between the dichotomous outcome variables and continuous correlates (i.e. subscales and child age) were assessed through a series of independent samples t-tests. The demographic covariates of community size, education level, and race were dichotomized and assessed for bivariate associations with the three outcome variables through 2x2 Chi-square tests. Bivariate associations between income (three-level categorical variable) and outcomes were assessed using Chi-square tests.

Results

A majority (72%) of parents believed that vaccines contributed to the cause of their child’s autism. The perception of vaccine safety/efficacy and trust in health institutions was significantly lower among parents who believed that vaccines had attributed to their child’s autism (Table 3).

About one-third of the sample (35%) reported that they would refuse to vaccinate their children if there were no penalties for doing so. Parents who would refuse vaccination reported more exposure to anti-vaccine media and rated their physicians significantly lower in informativeness and competence (Table 3).

Few parents (20%) would encourage others not to vaccinate their children. Those who would encourage others not to vaccine reported significantly lower physician informativeness, physician sensitivity, and physician-parent partnership building. They also reported less access to services. Parents who would discourage vaccination also reported less perceived risk of acquiring and having serious consequences from the diseases that vaccines prevent (Table 3).

Discussion

The vast majority (72%) of parents in this study believed that vaccines contributed to the cause of their child’s autism. Still, a great deal fewer parents agreed that they would refuse to vaccinate their children or that they would discourage others from vaccinating their children. The findings demonstrate that ecological and attitudinal factors influence attitudes toward childhood vaccines among parents of children with ASD. The small sample size and exploratory nature of this study limit its generalizability, yet the findings do suggest directions for future research. Future explorations of vaccine beliefs among parents of children with ASD must transcend the cognitive/attitudinal realm and investigate the contribution of ecological factors and care-related factors.

References