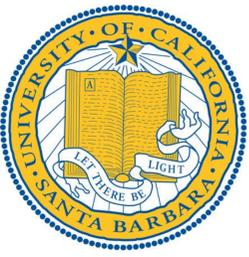


Increasing Food Flexibility in Adults and Adolescents with Autism Through Priming Intervention

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ABSTRACT

The purpose of this study was to examine the effects of incorporating priming (pre-practice with the menu) prior to social eating invitations on the participants' food flexibility in terms of: A) the number of restaurants participants attended in the local community, B) the number of restaurants participants rated as being willing to attend during baseline and at follow up on a survey of local restaurants, and C) the number of new menu items they ordered and tried. We also assessed participants' social gains in terms of A) a post intervention survey which asked participants to rate their comfort in participating in social eating situations before and after the intervention and B) the percentage of Social Eating Invitations (SEIs) participants accepted.

INTRODUCTION

Restrictive and Repetitive Behaviors and Interests (RRBIs) are considered a central feature of Autism Spectrum Disorders (ASDs) (Lopez et al., 2005; Szatmari et al., 2005; Rickler et al., 2007). Common RRBIs include restrictive food interests and insistence on sameness (Lord et al., 2000; Gravestock 2000; Munk and Repp 1994; Fodstad and Matson, 2008). Feeding and mealtime behaviors are a concern for individuals with ASDs due to the potential for causing medical concerns (poor nutrition, choking, aspiration) and even death (Shannon and Graef, 1996; Geier and Geier, 2006). Insistence on sameness has been shown to limit opportunities for peer interaction (Bentall, 1998). Research demonstrates that lower levels of peer interaction are associated with lower levels of self-esteem and a higher risk of anxiety (Segrin et al. 2000; Spiker et al., 2001).



METHOD

Design: A concurrent multiple baseline across-participants design was used during intervention to assess the effectiveness of incorporating priming, in the form of practice identifying foods to order, on participants' food flexibility and social skills. All priming sessions were implemented for one hour per week. Weekly meals took place at restaurants in the local community at lunch and dinner mealtimes.

Participants: Two adult males and one adolescent male diagnosed with ASD who were referred by a clinician for limited food repertoires, were selected to participate. The Koegel Autism Center confirmed ASD and severe food inflexibility in each of the participants through (1) direct observations, (2) self-reported food selectivity and (3) peer and parental reports on food selectivity. Further, all three participants had limited social interactions in regard to eating out with peers.

Participant	Gender	Age	Ethnicity	Diagnosis	Education Level
1	male	20	Hispanic	ASD	community college
2	male	22	Caucasian	ASD	graduate level
3	male	15	Caucasian	ASD	High school

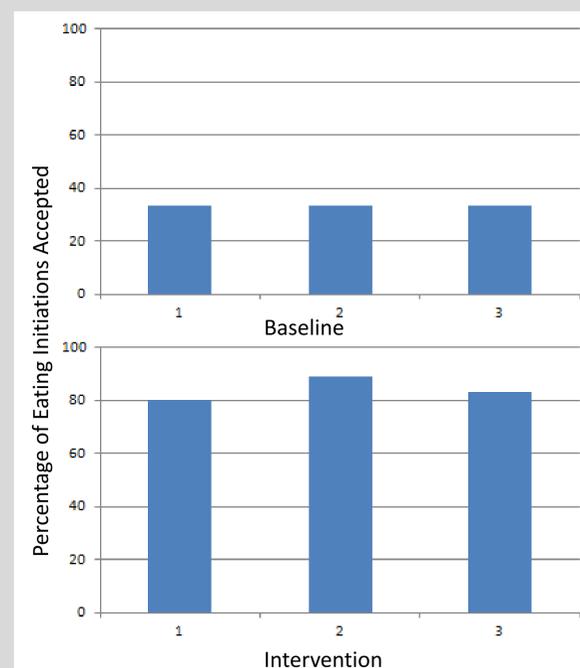
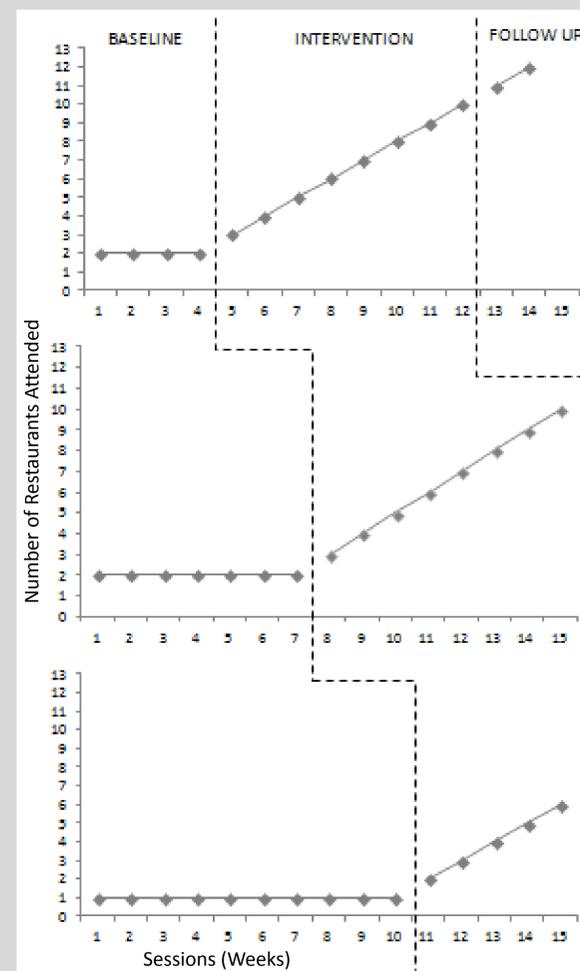
Baseline: During baseline sessions, participants received up to three invitations to eat at casual restaurants in the community. The first two invitations involved randomly generated new restaurants (those they had not reported eating at previously). If the participant refused invitations to the first two restaurants, the third invitation involved a randomly generated pre-baseline restaurant (those they had reported eating at previously). During baseline meals, participants met the research assistant in the chosen restaurant at a predetermined date and time. They were expected to order a meal and eat at the same table as the research assistant. The research assistant tracked data on the foods the participant ordered and ate.

Intervention: During the intervention sessions, a clinician met with the participant in a one-on-one setting. During each intervention session a priming component was implemented in the form of: 1) teaching the participant to access a website containing menus for local restaurants; and 2) helping them identify a menu item they would like to order. Participants were still provided with 3 invitations to eat at randomly generated restaurants during each session. During intervention all were new restaurants. Following completion of the intervention session, wherein the participants were provided with an opportunity to look at the online menu and identify a potential menu item, the participants were invited by a peer to eat at one of the primed restaurants. The participants then met the research assistant in the restaurant they selected at the predetermined date and time. The research assistant collected data on the foods the participants ate and generalization data in the form of asking the participant if they would be willing to try additional new restaurants.

Dependent Measures:

1. The number of restaurants the participants tried
2. The number of new foods tried
3. The percentage of Social Eating Invitations accepted
4. Likert scale measure of comfort with Social Eating

RESULTS



DISCUSSION

During baseline, all participants exhibited severe food inflexibility in terms of the number of restaurants they attended, the number of foods they ate, and the number of social eating invitations they accepted to new restaurants. Following the start of intervention, all participants immediately began to try new restaurants and increased the number of foods they tried and the number of social eating invitations they accepted. Thus, this intervention was effective in improving food flexibility in individuals with ASD. This research suggests that priming may be an efficient and effective strategy to improve food aversion that may interfere with other areas including nutrition and socialization.