

Sun Protection Among Parents and Children at Freshwater Beaches

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Objectives: This paper describes the sun-related behaviour of parents and their children, ages 5-12 years.

Methods: In-person interviews were conducted with parents and observations of parents and their children to ascertain: 1) parents' self-reported use of sunscreen, 2) parent-proxy reports of children's sunscreen use, and 3) observations of parents' and children's use of shade, hats and protective clothing. Data collection took place at freshwater beaches in BC's Southern Interior, between 12 pm and 5 pm, over a seven-day period during August 1999.

Results: 94 parents were interviewed and observed. Parent-proxy reports and observational data were collected on 161 children. Half (53%) of parents reported they were wearing sunscreen at the time of the on-beach interview. Most (65%) of parents reported that their children were wearing sunscreen at the time of the on-beach interview. Children's first application of sunscreen took place on average 1.5 hours prior to interview. Most parents (86%) reported that their children's sunscreen had not been re-applied at the time of interview. Few parents (13%) or children (5%) used shade as provided by nearby trees or umbrellas.

Conclusion: Public education should emphasize sunscreen re-application. Actions should be taken to enhance the convenient use of shade structures at public beaches.

The translation of the Abstract appears at the end of the article.

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Skin cancer has long been recognized as a public health problem for populations living in the Southern Hemisphere and recently appears to be emerging as an important health issue among people living in Canada.¹ Cumulative exposure to sunlight seems necessary for the development of squamous cell carcinoma, while sunburns received as a result of excessive sun exposure during childhood appear to be more important in the development of melanoma and basal cell carcinoma.²⁻⁵ Much of lifetime sun exposure occurs during childhood and^{6,7} 45% of children living in Canada receive at least one sunburn per summer.⁸ Preventing sunburn is becoming an important component of public health promotion strategies concerned with lowering the risk of developing skin cancer later in life.^{3,4,9,10} This paper describes results of in-person interviews conducted with parents and observations of parents and their children, ages 5-12 years, at freshwater beaches in BC's Southern Interior.

METHODS

Outcomes include: 1) parents' self-reported use of sunscreen, 2) parent-proxy reports of children's sunscreen use, and 3) observations of parents' and children's use of shade, hats and protective clothing. Data collection took place at freshwater beaches over a seven-day period, between the hours of 12 pm and 5 pm, during August 1999. Parents and legal guardians, part-time (15+ hours of care per week) or full-time caregivers were eligible to participate in the study. More than 95% of children were in the care of their parents at the time of the observations and interviews.

Trained interviewers (n=4) approached all adults who were accompanied by children at each beach and completed semi-structured interviews with 94 eligible parents. Interview questions included nine items that asked parents to report on their own sun protection behaviour, nine items to assess their children's sun protection behaviour, and socio-demographic characteristics. Interviewers recorded SPF from sunscreen bottle(s), where possible. Interviewers also observed parents and children to record information on the following: 1) use of shade, 2) wearing a hat, and 3) wearing protective clothing, using a

modified version of the Beach Scan Observation Checklist and Protocol.¹²

RESULTS

Study participants

Self-reports and observational data were collected for 94 parents. More than one child aged 5-12 years accompanied some parents. Thus, parent proxy reports and observational data were collected on 161 children. Most participants were mothers or female caregivers (79%). The average age of interview participants was 40 years (range 28 to 63 years). The average age of the children observed in this study was 9 years. Over half (58%) of the children observed were boys. Most (63%) of parents reported their children had light complexions, 35% had medium complexions, and 2% had dark complexions.

Table I describes the prevalence of: 1) parents' self-reported use of sunscreen, 2) parent-proxy reports of children's sunscreen use, and 3) observations of parents' and children's use of shade, hats and protective clothing. About half (53%) of parents reported they were wearing sunscreen at the time of the on-beach interview: 62% of those parents wore a sunscreen with SPF 30 and 24% wore a sunscreen with SPF 15 (range SPF 8-45). Parents' first application of sunscreen took place, on average, two hours before the interview. Most parents (82%) had not re-applied their sunscreen at the time of interview.

Most (65%) of parents reported that their children were wearing sunscreen at the time of the on-beach interview: 70% of those children wore a sunscreen with SPF 30 and 14% wore SPF 15 (range SPF 15-45). A high proportion of children (86%) who wore sunscreen used a water-proof formula. Children's first application of sunscreen took place on average 1.5 hours prior to interview. Most parents (86%) reported that their children's sunscreen had not been re-applied at the time of interview.

Few parents (13%) used shade as provided by trees or beach umbrellas. Few parents (4%) wore broad-rimmed hats and 7% wore baseball caps. Some parents (22%) wore either a T-shirt or long-sleeved shirt. Few children (5%) used shade as provided by trees or beach umbrellas; 3% wore broad-rimmed hats and 5% were

TABLE I

Sun-related Behaviour Among Parents and Children

Sun Protection Behaviour	Parents (n= 94) %	Children (n=161) %
Shade	13	5
Baseball cap	7	5
Broad-rimmed hat	4	3
T-shirt or long-sleeved shirt	22	9
Sunscreen use	53	65
Sunscreen SPF 30+	62	70
Sunscreen SPF 15-30	24	15
Sunscreen NOT re-applied	82	86

wearing baseball caps. Few children (9%) wore either a T-shirt or long-sleeved shirt.

DISCUSSION

At freshwater beaches in the Southern Interior of BC, a single application of sunscreen was the most common sun protection strategy; all other strategies were under-utilized. Although it is difficult to compare accurately across studies, since there are no standardized approaches to measuring sun protection, it is worth noting some marked differences between the study results reported here and those found in similar populations.¹² A study conducted in New Hampshire found that 22% of children wore shirts at the beach while only 9% of children we observed in British Columbia did so. Differences between the studies' findings may reflect differences in sample size, sample composition or other factors. Children in the New Hampshire study were aged 2-10 years while children in our study were aged 5-12 years. Children under the age of 5 may be more likely to have their attire determined and controlled by their parents. Children under the age of 5 also may be less likely to play in the water and therefore more likely than older children to keep their shirt on at the beach. We also compared the findings from our beach study with those reported in the 1996 Canadian National Survey on Sun Exposure & Protective Behaviours, a random-digit dialled telephone survey.¹³ Most parents (68%) in the national survey reported their children always or often used sunscreen, which is similar to our study findings. However, findings from the two studies differed significantly concerning children's use of hats; 58% of parents in the national survey reported that their children always or often wore a hat, compared with 8% of children who were

observed to be wearing hats during our study. Data collected in the national survey were based exclusively on parent-proxy reports, while our study used a combination of parent-proxy reports and interviewer observations. Reliance on parent-proxy reports may have resulted in an overestimate of child sun protection.

An important strength of this study is that self-reports were supplemented by direct observations. Self-reported measures alone have been the most widely used approaches to measuring sun-related behaviour. Further research should attempt to develop feasible approaches to incorporating observations and other more objective measures into study design.¹⁴ One of the weaknesses of this study is the lack of generalizability of findings as it necessarily used a convenience sample of parents and children.

While conducting the BC beach study, we anticipated that we would observe a high level of compliance with sun protection behaviour since the beach is an extremely high UV-exposure setting. However, few parents chose to access available shade at beaches, citing its inconvenient location away from the water's edge. Most parents relied primarily on sunscreen to protect themselves and their children from sunburn. A significant amount of research has been conducted in the Southern Hemisphere and the United States regarding effective and comprehensive skin cancer prevention strategies.¹⁵⁻²² Although the magnitude of the problem, the socio-cultural contexts and climates differ, Canadians could benefit by applying lessons learned in these settings. Based on our findings, we also would argue that public health education messages should emphasize sunscreen re-application and the provision of shade structures that are convenient to use.

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RÉSUMÉ

Objectifs : L'étude décrit le comportement de parents et d'enfants de 5 à 12 ans à l'égard de l'exposition solaire.

Méthode : Nous avons mené des entretiens directs avec des parents et observé des parents avec leurs enfants pour déterminer : 1) l'utilisation d'écrans solaires (parents et enfants) selon les déclarations des parents; 2) l'utilisation d'écrans solaires (enfants seulement) selon les déclarations des mandataires de parents; 3) l'utilisation d'endroits ombragés, de chapeaux et de vêtements protecteurs (parents et enfants) selon nos propres observations. Nous avons recueilli ces données sur les plages d'eau douce de l'intérieur sud de la Colombie-Britannique pendant sept jours, entre midi et 17 h, en août 1999.

Résultats : Nous avons interrogé et observé 94 parents, recueilli les rapports de mandataires et observé directement le comportement de 161 enfants. La moitié (53 %) des parents déclaraient s'être enduits d'un écran solaire lors de l'entretien sur la plage. La plupart (65 %) ont déclaré que leurs enfants portaient un écran solaire durant l'entretien. La première application d'écran solaire aux enfants avait eu lieu en moyenne une heure et demie avant. La plupart des parents (86 %) disaient ne pas avoir réappliqué d'écran solaire à leurs enfants au moment de l'entretien. Peu de parents (13 %) et encore moins d'enfants (5 %) s'abritaient sous des parasols ou à l'ombre des arbres tout proches.

Conclusion : L'information destinée au public devrait insister sur le besoin de réappliquer les écrans solaires. Il faudrait installer davantage de structures couvertes dans des endroits facilement accessibles sur les plages publiques.



Hearing and speech go together

Children learn speech and language from listening to other people talk. A child's first few years are critical for this development. If hearing loss exists, a child does not get the full benefit of language learning experiences. This can result in delays in speech and language development. If you suspect your child has difficulty communicating, contact a professional.

Check the yellow pages or visit our web site to find a speech-language pathologist or audiologist near you: www.caspa.ca