

Random thoughts about randomised trials: some of the more unusual things people have studied

24 January 2014

Mike Clarke

All-Ireland Hub for Trials Methodology Research
Cochrane Methodology Review Group

Evidence Based Health Care

- Is not just about the effects of health care
- But, reliable evidence on which interventions are beneficial, which are harmful and which have little or no effect is vital to well informed decision making
- It needs to come from randomised trials and systematic reviews of trials
- **And there are some unusual trials out there**

Key principles for research into the effects of healthcare interventions

- The effects of various interventions might not be very different for important outcomes
- But, if moderate differences are worthwhile
- Then, we need good evidence to identify these differences
- To get good evidence, the research needs to be as reliable as possible
- It needs to minimise bias and to minimise chance effects
- **And there are some unusual trials out there**

How many trials are out there?

Cochrane Central Register of Controlled Trials

726,000 reports

25,000 reports published per year

WHO ICTRP Search Portal

220,000 trials listed

64,000 recruiting

As of January 2014

Health warning

All randomised trials should be designed and interpreted in light of the totality of available evidence, through an up-to-date systematic review.

But, I won't let that stop me now.

**So, where to
begin?**

Sweetening the Till: The Use of Candy to Increase Restaurant Tipping¹

DAVID B. STROHMETZ²
Monmouth University

BRUCE RIND
Temple University

REED FISHER
Johnson State College

MICHAEL LYNN
Cornell University

A common practice among servers in restaurants is to give their dining parties an unexpected gift in the form of candy when delivering the check. Two experiments were conducted to evaluate the impact of this gesture on the tip percentages received by servers. Experiment 1 found that customers who received a small piece of chocolate along with the check tipped more than did customers who received no candy. Experiment 2 found that tips varied with the amount of the candy given to the customers as well as with the manner in which it was offered. It is argued that reciprocity is a stronger explanation for these findings than either impression management or the good mood effect.

Journal of Applied Social Psychology 2002; 32: 300-309

92 dining parties at a restaurant
in New York

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graph TD; A[92 dining parties at a restaurant in New York] -- red arrow --> B[Bill, without a sweet]; A -- blue arrow --> C[Bill, with a "fancy, foil wrapped piece of chocolate"];
```

Bill, without a sweet

Bill, with a "fancy, foil
wrapped piece of
chocolate"

Did it work?

Total spending	\$1000
Tips without a sweet	\$151
Tips with the sweet	
Increase in tip	

Did it work?

Total spending	\$1000
Tips without a sweet	\$151
Tips with the sweet	\$178
Increase in tip	18%

**Any other
tips?**

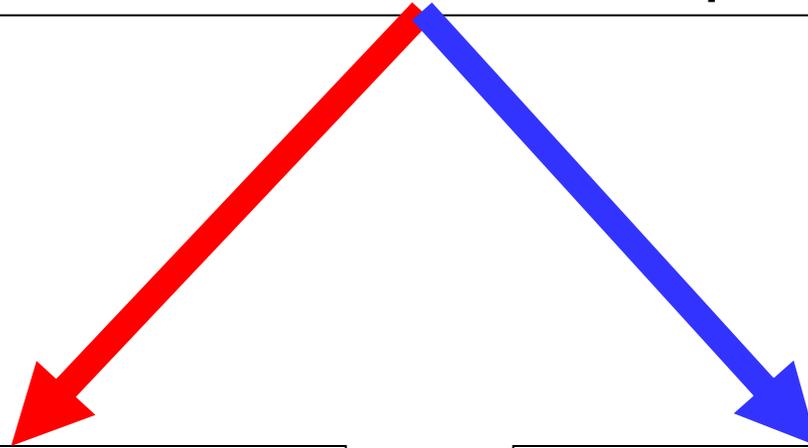
Effect on Restaurant Tipping of Male and Female Servers Drawing a Happy, Smiling Face on the Backs of Customers' Checks

BRUCE RIND¹ AND PRASHANT BORDIA
Temple University

Research has shown that a server's smiling can increase restaurant tips and that a server's writing "thank you" on the backs of checks can also increase tips. In the current study, these two approaches were combined. An experiment was conducted in which a male or female server drew a happy, smiling face on the backs of checks before delivering them to customers, or simply delivered checks with nothing drawn on the back. It was predicted that this tactic would increase tips for the female server because of an increased perception of friendliness, but would not increase tips for the male server because such behavior would be perceived as gender-inappropriate. Results were consistent with predictions.

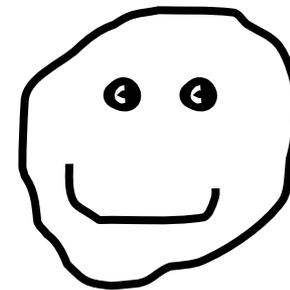
Journal of Applied Social Psychology 1996; 26: 218-225

89 dining parties at an upscale restaurant in Philadelphia



Bill, without a drawing

Bill, with a smiley face on the back



Hypotheses

Drawing a happy, smiling face would increase tips when done by a female server

Drawing a happy, smiling face would not increase tips when done by a male server, “rather than inducing customers to see a male server as friendly, this procedure may be more likely in general to induce customers to form the impression that the server is strange.”

Did it work?

Waitresses

Total spending	\$1000
Tips without a happy face	\$278
Tips with the happy face	
Increase in tip	

Did it work?

Waitresses

Total spending	\$1000
Tips without a happy face	\$278
Tips with the happy face	\$330
Increase in tip	19%

A substantial return on the low-cost investment of drawing a face on the back of checks. For the more than half million female servers in the U.S., systematic use of this technique could mean millions of dollars of extra income annually.

Did it work?

Waiters

Total spending	\$1000
Tips without a happy face	\$214
Tips with the happy face	
Increase in tip	

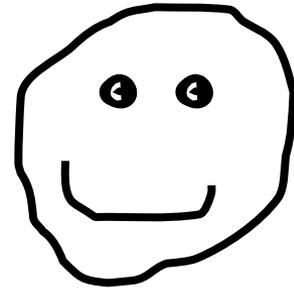
Decrease

Did it work? Waiters

Total spending	\$1000
Tips without a happy face	\$214
Tips with the happy face	\$178
Increase in tip	17%

Decrease

**Call that a
doodle?**



APPLIED COGNITIVE PSYCHOLOGY

Appl. Cognit. Psychol. (2009)

Published online in Wiley InterScience

(www.interscience.wiley.com) DOI: 10.1002/acp.1561

What Does Doodling do?

JACKIE ANDRADE*

School of Psychology, University of Plymouth, UK

Applied Cognitive Psychology 2009; 24: 100-106

Question

“Doodling is a way of passing the time when bored by a lecture or a telephone call.”

“Does it improve or hinder attention to the primary task?”

40 members of the MRC Applied
Psychology Unit's participant panel

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graph TD; A[40 members of the MRC Applied Psychology Unit's participant panel] -- red arrow --> B[Control group]; A -- blue arrow --> C[Shade in squares or circles];
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Control group

Shade in squares or
circles

Did it work?

Remembering 8 names and 8 places

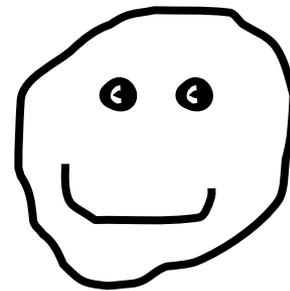
Control group	5.8
Doodling group	
Increase with doodling	

Did it work?

Remembering 8 names and 8 places

Control group	5.8
Doodling group	7.5
Increase with doodling	29%

“Unlike many dual task situations, doodling while working can be beneficial. Future research could test whether doodling aids cognitive performance by reducing day dreaming.”



Hats for the newborn infant

D M CHAPUT DE SAINTONGE, K W CROSS, M K S HATHORN, SHEILA R LEWIS, J K STOTHERS

British Medical Journal, 1979, 2, 570-571

Summary and conclusions

The efficacy of a Gamgee-lined hat in reducing the rate of fall in rectal temperature of infants during the first 30 minutes of life was studied. The trial, which included 211 infants, was randomised, prospective, and controlled. One hundred and seven infants were exposed to overhead radiant heaters. Of these, only 30 had normal deliveries, so the analysis was confined to the infants who were not subjected to radiant heat, and in this group no conclusions were drawn about the efficacy of a hat or a radiant heater. In the 104 infants not subjected to radiant heat, body weight, initial rectal temperature, the application of hat, the environmental temperature, and the duration of exposure while naked were all found to influence measurably the rate of fall in rectal temperature during the first 30 minutes.

Gamgee-lined hats should be routinely used to minimise heat loss, especially in small infants exposed at birth, during surgical operations, and during investigations necessitating prolonged exposure.

Introduction

The mortality of newborn babies is dramatically reduced if they are kept warm.¹⁻³ In addition, Stanley and Alberman⁴ state that respiratory distress "... could be reduced if particular attention were paid to the maintenance of body temperature."

The brain of the newborn infant is a major heat-producing organ.⁴ By November 1977 Stothers and Warner had completed investigations which were reported to the Neonatal Society on 2 February 1978. They found that a closely fitting Gamgee hat (see figure) as opposed to a stockinette hat provided the neonate with measurable thermal protection in a cool environment. Thus at 26°C infants wearing Gamgee hats had an oxygen consumption of 7.4 ml/kg/min compared with a consumption of 8.8 ml/kg/min in naked infants. The same insulation applied to the lower abdomen did not have a measurable effect.

As the time of the greatest heat loss is immediately after birth we decided to undertake a hat trial in newborn infants.

Methods

We measured the effect of head insulation in a prospective, randomised, controlled trial of hats. The trial was performed at the North Middlesex Hospital and was accepted by the hospital's obstetricians and paediatricians, its ethical committee, and its midwifery staff.

The trial was not conducted blind, for our ingenuity did not run to a control hat which had the appearance of the real article but which



Area of head covered by woolen hat lined with a single layer of Gamgee (Vernid gauze and cotton tissue, medium quality, Code No 1695).

conferred no thermal insulation. We expected that birth weight, length of exposure, and several other variables would alter the baby's rate of heat loss. A balanced allocation of the treatments within strata was not considered feasible, partly because of its complexity and partly because of the need to apply the hat very soon after birth before many of the other relevant variables could be measured.

The research nurse appointed to conduct the trial was provided with a separate sealed envelope containing instructions for each infant entering the trial, which she opened during the delivery. Each group of four envelopes contained equal numbers of control and experimental instructions, thus keeping the two groups matched for size at different seasons of the year.

At first we had hoped to obtain both the mother's and the infant's rectal temperatures, but the maternal measurement interfered too much with the conduct of the delivery and was abandoned. Once the baby had been delivered the research nurse started a stopwatch and inserted a thermistor probe into the rectum of the infant within one minute. The temperature was then recorded one to four minutes later. We could not fully define the environment of each labour ward, but the temperature was measured near the baby's crib in a position free from obvious draughts and overt infrared radiation. Notes were made of the time and the nature of all procedures carried out on the baby. The exposure time of a baby was the period before a nappy and nightgown had been applied and before the application of two to three blankets by the nurse. About half the nurses would routinely draw up a blanket in the form of a hood partially protecting the baby's head. The baby was normally given briefly to the mother at this time. Exposure time was increased by the baby being undressed for a clinical examination. Further readings of the baby's temperature and its environment were made at 30, 60, and 120 minutes.

After 30 minutes some babies were moved to a nursery, the special care unit, or an incubator at the discretion of the medical or nursing staff. We therefore confined the analysis of our results to the first half hour of life and used the precise time interval between readings to calculate the rate of temperature fall in °C per hour. Notes were made of any other interventions such as the switching on of overhead radiant heating for the baby. It seemed best that the staff should exercise their own skill and judgment in caring for the infants by these various interventions, even if it seemed to the research nurse that babies without hats were more often given extra heating.

Results

Two hundred and twenty-eight babies entered the trial from January to December 1978. Seventeen of these babies were later excluded from the analysis because of gross abnormality of the baby

London Hospital Medical College, London E1 2AD

D M CHAPUT DE SAINTONGE, PHD, MRCP, senior lecturer in clinical pharmacology and therapeutics

K W CROSS, MSc, FRCP, professor of physiology

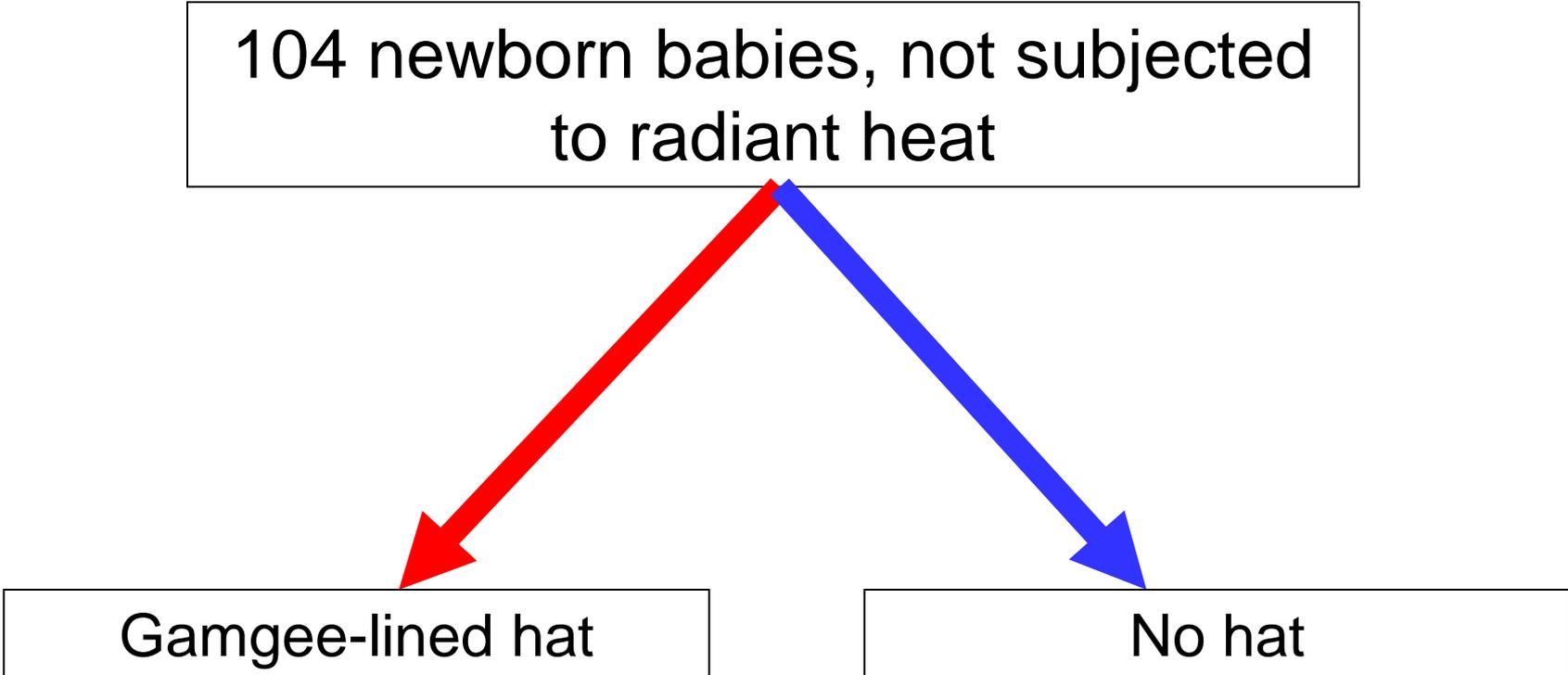
M K S HATHORN, MB, FRD, reader in physiology

J K STOTHERS, MB, MRCP, lecturer in paediatrics

North Middlesex Hospital, London N18 1SD

SHEILA R LEWIS, PHD, FRCP, consultant paediatrician

104 newborn babies, not subjected
to radiant heat



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graph TD; A[104 newborn babies, not subjected to radiant heat] -- red arrow --> B[Gamgee-lined hat]; A -- blue arrow --> C[No hat];
```

Gamgee-lined hat

No hat

“The trial was not conducted blind, for our ingenuity did not run to a control hat which had the appearance of the real article but which conferred no thermal insulation.”

Did the hats change the rate of cooling of the babies?

“the hats used in this study _____
_____ the rate of cooling of the infant.”

Did the hats change the rate of cooling of the babies?

“the hats used in this study significantly diminished the rate of cooling of the infant.”

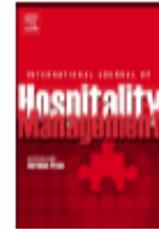




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Research note

Lipstick and tipping behavior: When red lipstick enhance waitresses tips

Nicolas Guéguen*, Céline Jacob

Université de Bretagne-Sud, France

ARTICLE INFO

Keywords:

Makeup

Lipstick

Red

Attractiveness

Tipping

ABSTRACT

Previous research has demonstrated that makeup increases perceived women's attractiveness and femininity for men. However, the effect of lipstick had never been tested.

An experiment was carried out in restaurant in order to verify if waitresses' lips makeup is associated with an increase in patrons' tipping behavior. Female waitresses with and without lipstick were instructed to act in the same way than usual with their patrons. Results showed that lipstick, and particularly red lipstick, was associated with greater male patrons (but not female patrons) tipping behavior. The increase of attractiveness and femininity of waitresses wearing lipstick and red lips was used to explain the results.

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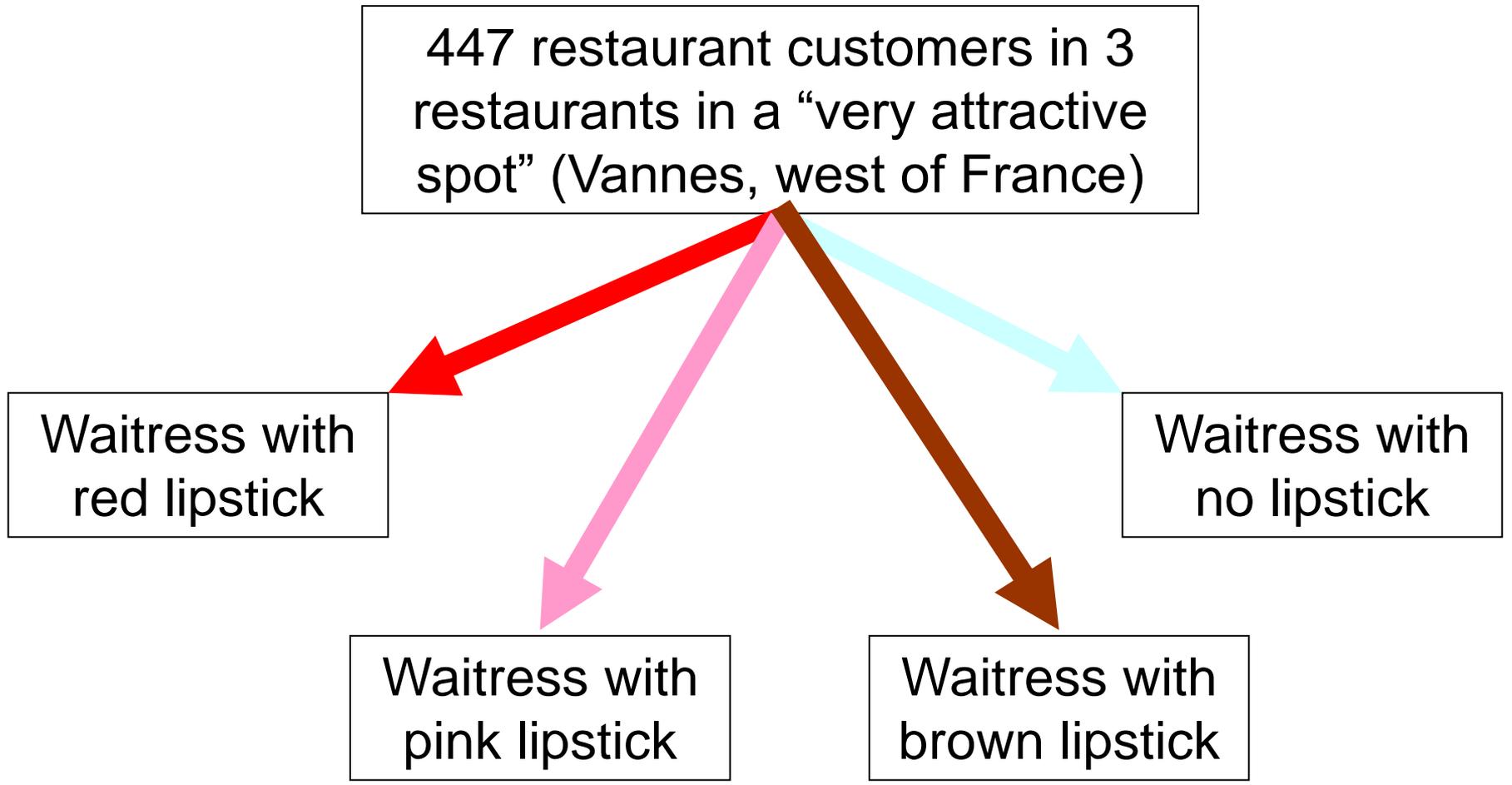
447 restaurant customers in 3
restaurants in a “very attractive
spot” (Vannes, west of France)

Waitress with
red lipstick

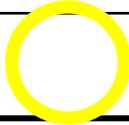
Waitress with
no lipstick

Waitress with
pink lipstick

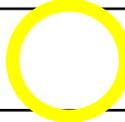
Waitress with
brown lipstick



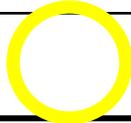
Did it work? (Percentage leaving a tip)

Customer	No lipstick	Red lipstick
Woman	26%	
Man		

Did it work? (Percentage leaving a tip)

Customer	No lipstick	Red lipstick
Woman	26%	
Man	30%	

Did it work? (Percentage leaving a tip)

Customer	No lipstick	Red lipstick
Woman	26%	31%
Man	30%	

Did it work? (Percentage leaving a tip)

Customer	No lipstick	Red lipstick
Woman	26%	31%
Man	30%	51%

“We found that male patrons gave tips more often to a waitress who wore lipstick and, when they did so, they gave her larger amounts of money. However, this effect was found only when waitresses wore red lipstick. With female patrons no lipstick effect was found.”

You Are What You Eat: Within-Subject Increases in Fruit and Vegetable Consumption Confer Beneficial Skin-Color Changes

Ross D. Whitehead^{1*}, Daniel Re¹, Dengke Xiao¹, Gozde Ozakinci², David I. Perrett^{1*}

¹ School of Psychology, Perception Lab, University of St Andrews, St Andrews, Fife, Scotland, ² School of Medicine, University of St Andrews, St Andrews, Fife, Scotland

Abstract

Background: Fruit and vegetable consumption and ingestion of carotenoids have been found to be associated with human skin-color (yellowness) in a recent cross-sectional study. This carotenoid-based coloration contributes beneficially to the appearance of health in humans and is held to be a sexually selected cue of condition in other species.

Methodology and Principal Findings: Here we investigate the effects of fruit and vegetable consumption on skin-color longitudinally to determine the magnitude and duration of diet change required to change skin-color perceptibly. Diet and skin-color were recorded at baseline and after three and six weeks, in a group of 35 individuals who were without makeup, self-tanning agents and/or recent intensive UV exposure. Six-week changes in fruit and vegetable consumption were significantly correlated with changes in skin redness and yellowness over this period, and diet-linked skin reflectance changes were significantly associated with the spectral absorption of carotenoids and not melanin. We also used psychophysical methods to investigate the minimum color change required to confer perceptibly healthier and more attractive skin-coloration. Modest dietary changes are required to enhance apparent health (2.91 portions per day) and attractiveness (3.30 portions).

Conclusions: Increased fruit and vegetable consumption confers measurable and perceptibly beneficial effects on Caucasian skin appearance within six weeks. This effect could potentially be used as a motivational tool in dietary intervention.



Before and after: A study has found that eating a diet of fruit and vegetables can lead to a person having a healthy glow and appearing more attractive in just six weeks

“Increased fruit and vegetable consumption confers measurable and perceptibly beneficial effects on Caucasian skin appearance within six weeks. This effect could potentially be used as a motivational tool in dietary intervention.”

Effect of Potassium Citrate on Renal Stone Formation During Spaceflight

Peggy A. Whitson
Edgar K. Hudson and Clarence F. Sams

From the Astronaut Office (PAW), Space Medicine Division (JA.J) and Human Adaptation and Countermeasures Division (CFS), National Aeronautics and Space Administration Johnson Space Center; JES Tech (EKH) and Human Adaptation and Countermeasures Division, Wyle Integrated Science and Engineering Group (RAP, MNG), Houston, Texas

Abbreviations and Acronyms

CAOX = calcium oxalate

ISS = International Space Station

JSC = Johnson Space Center

KCIT = potassium citrate

NASA = National Aeronautics and Space Administration

R+0-2 = first 3 days after landing

R+7 = 7 days after landing

Submitted for publication February 23, 2009.
Study received approval from the NASA Johnson Space Center Committee for the Protection of Human Subjects, Russian Bioethics Board, European Medical Board and Human Research Mul-

The study was done in 30 long duration spaceflight crew members to the space stations Mir and International Space Station.

Purpose: Exposure to microgravity affects human physiology and results in changes in urinary chemical composition during and after spaceflight, favoring an increased risk of renal stones. We assessed the efficacy of potassium citrate to decrease the stone risk during and after spaceflight.

Materials and Methods: The study was done in 30 long duration spaceflight crew members to the space stations Mir and International Space Station. Before during and after spaceflight 24-hour urine samples were collected to assess the renal stone risk. Potassium citrate (20 mEq) was ingested daily by International Space Station crew members in a double-blind, placebo controlled study. Mir crew members performed the identical protocol but did not ingest medication.

Results: Potassium citrate treated crew members had decreased urinary calcium excretion and maintained the calcium oxalate supersaturation risk at preflight levels compared to that in controls. Increased urinary pH in the treatment group decreased the risk of uric acid stones.

Conclusions: Results from this investigation suggest that supplementation with potassium citrate may decrease the risk of renal stone formation during and immediately after spaceflight.

Journal of Urology 2009; 182: 2490-2496

**Is it easier to
recruit in
space?**

Do doctors know best? Comments on a failed trial

Caroline J Hunt, Louise M Shepherd and Gavin Andrews

Medical Journal of Australia 2001; 174: 144-146

Patients with mild to moderate depression in primary care

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graph TD; A[Patients with mild to moderate depression in primary care] --> B[Structured problem solving]; A --> C[Selective serotonin reuptake inhibitor (SSRI)];
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Structured problem solving

Selective serotonin reuptake inhibitor (SSRI)

0 patients ~~identified~~
recruited

What happened to the 114 patients?

Too depressed	13 (11%)
Not depressed enough	27 (24%)
Previous episode of psychiatric illness	6 (5%)
Serious suicidal intent	5 (4%)
Current drug or alcohol abuse	6 (5%)
Current drug treatment for depression	38 (33%)
Current psychological treatment for depression	34 (30%)
Physical problems precluded use of an SSRI	1 (1%)
Previous failure to respond to an SSRI	5 (4%)

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Other reasons to be ineligible	22 (19%)

What happened to the 114 patients?

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Current drug treatment for depression	38 (33%)
Current psychological treatment for depression	34 (30%)
Physical problems precluded use of an SSRI	1 (1%)
Previous failure to respond to an SSRI	5 (4%)
GP not confident about using problem solving	20 (18%)
Other reasons to be ineligible	22 (19%)
Patient refused randomisation	7 (6.1%)

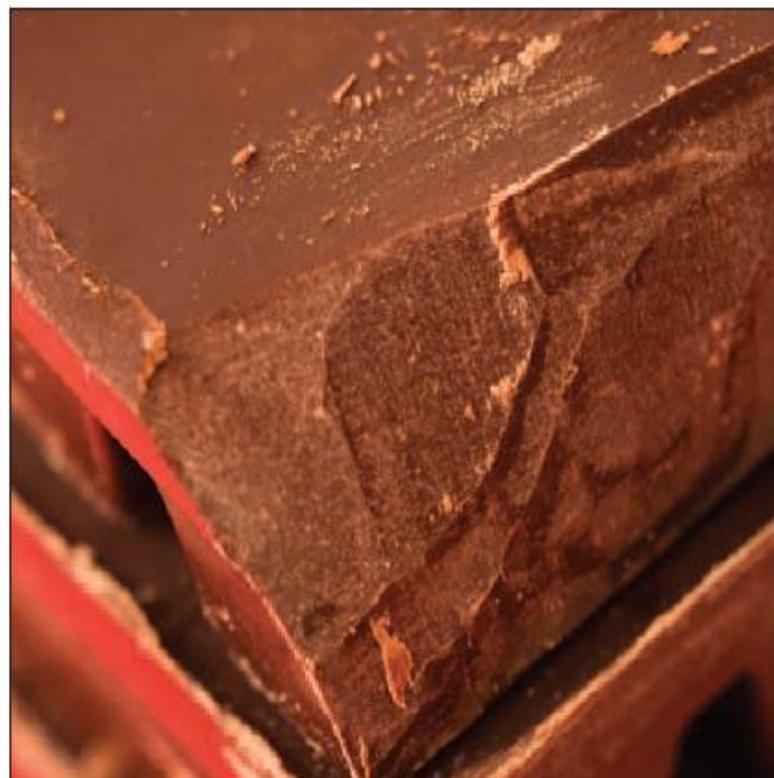
**Can we
cheer them
up?**

Research of a holiday kind

A clinical trial gone awry: the Chocolate Happiness Undergoing More Pleasantness (CHUMP) study

ABSTRACT

The randomized controlled trial is the “gold standard” for evaluating the benefits and harms of interventions. The Chocolate Happiness Undergoing More Pleasantness (CHUMP) study was designed to compare the effects of dark chocolate, milk chocolate and normal chocolate consumption on happiness. Although the intention-to-treat analysis showed that participants who received either dark or milk chocolate were happier than those who received no additional chocolate, the actual-consumption analysis showed that there were no differences between any of the groups. The reason for this result is that many participants switched groups mid-study because of their personal chocolate preferences. Although the CHUMP study was pleasurable, it demonstrated the difficulties associated with performing a truly blinded clinical trial.



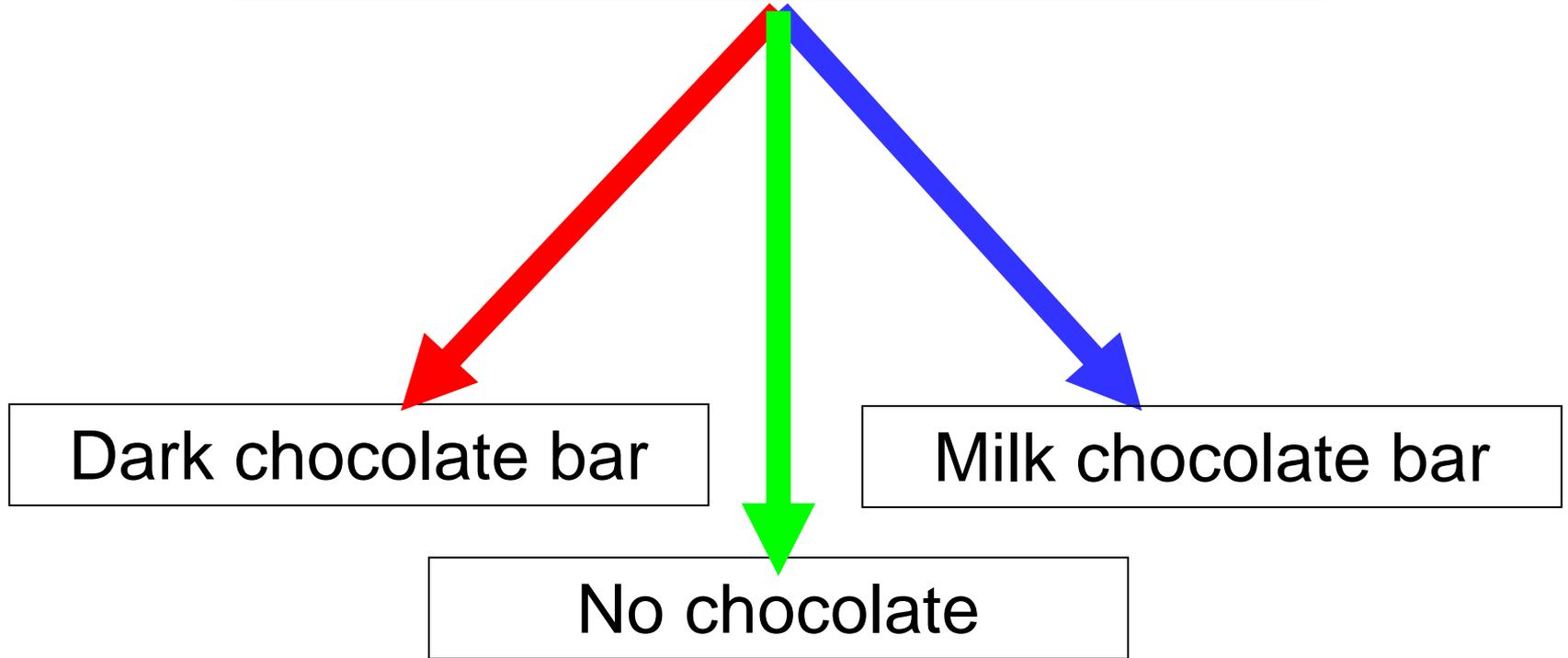
CMAJ 2007; 177: 1539-1541

180 adults visiting a paediatric health care, daily intervention

Dark chocolate bar

Milk chocolate bar

No chocolate



Did it work?

Change in happiness on a 10 point scale	
No chocolate	
Dark chocolate bar	
Milk chocolate bar	

Did it work?

Change in happiness on a 10 point scale	
No chocolate	-0.37 (SD 0.20)
Dark chocolate bar	
Milk chocolate bar	

Did it work?

Change in happiness on a 10 point scale	
No chocolate	-0.37 (SD 0.20)
Dark chocolate bar	+0.63 (SD 0.37)
Milk chocolate bar	

Did it ~~work~~ exist?

Change in happiness on a 10 point scale	
No chocolate	-0.37 (SD 0.20)
Dark chocolate bar	+0.63 (SD 0.37)
Milk chocolate bar	+0.68 (SD 0.40)

Competing interests: There are no conflicts to report. However, if any chocolate company feels induced to supply me with a lifetime supply of dark chocolate, I would hardly refuse.

Acknowledgements: I greatly appreciate the low prices at Costco that allowed for the cheap purchase of chocolate used in this study.

Disclaimer: For anyone who takes these data and analyses seriously, I also have some Florida swampland for sale.

Research of a holiday kind

Clinical trial goes awry: the Chocolate Happiness Undergoing More Pleasantness (CHUMP) study

ABSTRACT

The randomized controlled trial is the "gold standard" for evaluating the benefits and harms of interventions. The Chocolate Happiness Undergoing More Pleasantness (CHUMP) study was designed to compare the effects of dark chocolate, milk chocolate and normal chocolate consumption on happiness. Although the intention-to-treat analysis showed that participants who received either dark or milk chocolate were happier than those who received no additional chocolate, the actual-consumption analysis showed that there were no differences between any of the groups. The reason for this result is that many participants switched groups mid-study because of their personal chocolate preferences. Although the CHUMP study was pleasurable, it demonstrated the difficulties associated with performing a truly blinded clinical trial.

The randomized controlled trial is the "gold standard" for testing the beneficial and harmful effects of interventions. There has been a growing concern in the literature about the potential for bias during randomization of participants in clinical trials.¹⁻³ I designed the Chocolate Happiness Undergoing More Pleasantness (CHUMP) study to compare the effects of dark chocolate, milk chocolate and "normal" chocolate consumption on happiness. The CHUMP study was a double-blinded clinical trial, and it demonstrated the difficulties associated with performing a truly blinded clinical trial.

Methods

The CHUMP study was conducted over a 1-month period at a tertiary pediatric health care centre. Between Oct. 15, 2006, and Nov. 15, 2006, 144 adults were asked to participate in the CHUMP study. Owing to the study's popularity and the insistence of the research ethics board, an additional 36 adults were added to the study, for a total of 180 participants (108 women, 72 men). The research ethics board of the Chocolate Consumption Society approved the CHUMP study.

The participants were randomized into 3 study groups. Group 1 received 1 dark chocolate bar (50 g, > 90% cocoa) each day, and group 2 received 1 milk chocolate bar (50 g, 20% cocoa) each day. Members of group 3 did not receive any additional chocolate; however, they continued with their normal chocolate-eating habits.

Each participant rated their happiness before and after the study using a visual analog scale (0 = unhappy, 10 = happy). Participants were also asked to rate their health, global happiness and personal work history (0 = worst, 10 = best). In order to establish participants' baseline chocolate-eating



Photo.com

habits, participants were asked the frequency of chocolate consumption and the amount consumed on a daily basis to give a total chocolate bar day-equivalent. The total chocolate bar day-equivalent included both dark chocolate bar day-equivalents and milk chocolate bar day-equivalents.

I analyzed contingency tables with χ^2 tests, and I used analysis of variance to test for differences in the mean chocolate consumption among the 3 groups. No specific research funding was obtained for the CHUMP study; however, Costco provided a generous discount toward the purchase of the boxes of chocolate consumed in the study.

Results

The CHUMP study began with 60 participants in each group. Despite my efforts to keep the study groups blinded, some of the participants changed groups mid-study. Indeed, those in the control group (who received no extra chocolate) decided to start

**Any proper
Christmas
trials?**

Carols in the wind

John E Marley, Paula Searle, Nicole L Chamberlain,
Deborah R Turnbull and Catherine M Leahy

Medical Journal of Australia 2001; 175: 656-658

43 people at St Theodore's
Anglican Church in Adelaide

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graph TD; A[43 people at St Theodore's Anglican Church in Adelaide] -- red arrow --> B[Listen to music played by a pipe organ followed by a digital organ]; A -- blue arrow --> C[Listen to music played by a digital organ followed by a pipe organ];
```

Listen to music played
by a pipe organ followed
by a digital organ

Listen to music played
by a digital organ
followed by a pipe organ

The organs had similar effects, which were ...

Tension / anxiety	
Depression / rejection	
Anger / hostility	
Vigour	
Fatigue	
Confusion / bewilderment	

The organs had similar effects, which were ...

Tension / anxiety	Significantly reduced by both
Depression / rejection	
Anger / hostility	
Vigour	
Fatigue	
Confusion / bewilderment	

The organs had similar effects, which were ...

Tension / anxiety	Significantly reduced by both
Depression / rejection	Significantly reduced by both
Anger / hostility	
Vigour	
Fatigue	
Confusion / bewilderment	

The organs had similar effects, which were ...

Tension / anxiety	Significantly reduced by both
Depression / rejection	Significantly reduced by both
Anger / hostility	Significantly reduced by both
Vigour	
Fatigue	
Confusion / bewilderment	

The organs had similar effects, which were ...

Tension / anxiety	Significantly reduced by both
Depression / rejection	Significantly reduced by both
Anger / hostility	Significantly reduced by both
Vigour	No significant change
Fatigue	
Confusion / bewilderment	

The organs had similar effects, which were ...

Tension / anxiety	Significantly reduced by both
Depression / rejection	Significantly reduced by both
Anger / hostility	Significantly reduced by both
Vigour	No significant change
Fatigue	Significantly reduced by both
Confusion / bewilderment	

The organs had similar effects, which were ...

Tension / anxiety	Significantly reduced by both
Depression / rejection	Significantly reduced by both
Anger / hostility	Significantly reduced by both
Vigour	No significant change
Fatigue	Significantly reduced by both
Confusion / bewilderment	No significant change

Pipeless (digital) organs are as effective as pipe organs
in inducing beneficial mood changes.

**Where does
it end?**

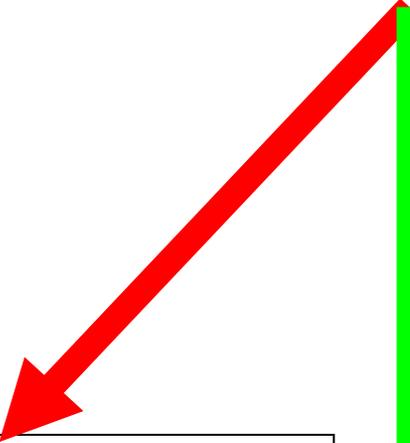
Effect of Server's "Thank You" and Personalization on Restaurant Tipping¹

BRUCE RIND² AND PRASHANT BORDIA
Temple University

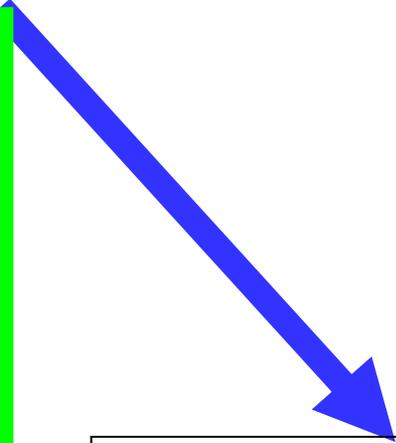
Servers in restaurants frequently use the tactic of writing "thank you" on the backs of checks before delivering them to dining parties. Servers also frequently personalize their interaction with dining parties by signing their first name below the gratitude message. The effectiveness of these tactics in increasing tips was examined. In a field experiment conducted in an upscale restaurant in a large Northeastern city, a server wrote on the backs of the checks either nothing, "thank you," or "thank you" plus her first name. The addition of "thank you" increased tip percentages, although personalization by adding her first name had no effect. It was concluded that the commonly employed low-cost tactic of expressing gratitude to customers by writing "thank you" on the check can produce a worthwhile return.

Journal of Applied Social Psychology 2002; 32: 300-309

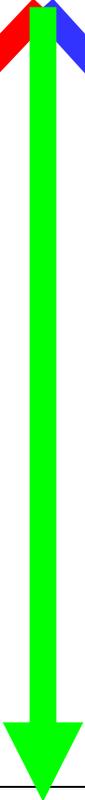
51 dining parties at an upscale restaurant in Philadelphia



Check, with a “Thank you” on the back



Check, with a “Thank you” and the server’s name on the back



Check, with nothing on the back

Did it work?

Total spending	\$1000
Tips with nothing written	\$163
Tips with a “Thank you”	
Increase with a “Thank you”	
Tips with a “Thank you” and server’s name	
Further increase with the server’s name	

Did it work?

Total spending	\$1000
Tips with nothing written	\$163
Tips with a “Thank you”	\$180
Increase with a “Thank you”	11%
Tips with a “Thank you” and server’s name	
Further increase with the server’s name	

Did it work?

Total spending	\$1000
Tips with nothing written	\$163
Tips with a “Thank you”	\$180
Increase with a “Thank you”	11%
Tips with a “Thank you” and server’s name	\$180
Further increase with the server’s name	0%

A substantial return for the minimal investment of adding a “thank you” to the check. For the 1.3 million servers in the U.S., systematic employment of this technique could mean millions of dollars of additional income annually.

**There's only
one way to
finish**

Thank you

Thank you

Thank you

Thank you

Thank you

Thank you

Thank you

Thank you

Thank you

Want to learn more?



2-day course on randomised trials
Riddell Hall, Belfast
7-8 May 2014

Question formulation
Writing a protocol
**Recruitment and
randomisation**

**Choosing and
analysing outcomes**
Governance
Getting funded

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