Because I'm Worth It:

Reminders of Personal Sacrifice and Suggested Rationalizations

Increase Residents' Willingness to Accept Industry Gifts

Sunita Sah, MD PhD

George Loewenstein, PhD

Carnegie Mellon University

Corresponding author:

Dr. Sunita Sah

Carnegie Mellon University

5000 Forbes Avenue

Pittsburgh, PA 15213

Email: sunitasah@cmu.edu

ABSTRACT

Context

Despite expanding research on the prevalence and consequences of conflicts of interest in medicine, little attention has been given to the psychological processes that enable physicians to rationalize the acceptance of gifts.

Objective

To determine whether reminding resident physicians of the sacrifices made to obtain training, as well as suggesting this as a potential rationalization, increases self-stated willingness to accept gifts from industry.

Design, Setting, and Participants

301 US resident physicians from 2 sample populations (pediatrics and family medicine) recruited during March-July 2009 participated in a survey presented as evaluating quality of life and values. Physicians were randomized to one of three different online surveys. The *sacrifice-reminders* survey (n=120) asked questions about sacrifices made in medical training, followed by questions regarding the acceptability of receiving gifts from industry. The *suggested-rationalization* survey (n=121) presented the same sacrifice questions, followed by a suggested possible rationalization (based on sacrifices made in medical training) for acceptance of gifts, before the questions regarding the acceptability of gifts. The *control* survey (n=60) asked about the acceptability of gifts without first asking questions about sacrifices or suggesting a rationalization.

Main Outcome Measures

Physician self-stated acceptability of receiving gifts from industry

Results

Reminding physicians of sacrifices made in obtaining their education resulted in gifts being evaluated as more acceptable ($P< .05$), and, even though most residents disagreed with the suggested rationalization, exposure to it further increased the perceived acceptability of gifts ($P< .001$).

Conclusions

Feelings of sacrifice in residents can contribute to justification of the acceptability of receiving gifts. Subtly suggested rationalizations further increase acceptability of receiving gifts, especially in those physicians that express disagreement with them.

Keywords: conflicts of interest, medical, rationalization, ethics, regulation, residents, working conditions

Why do many physicians feel comfortable accepting gifts from pharmaceutical and medical device manufacturers that appear, to many critics, to be unethical? Studies have examined the extent of physician-industry relationships,[1,2] identified strategies used in pharmaceutical sales and marketing,[3,4] explored the potential effect of gifts on physician prescribing behavior,[1,5] and advocated policies to reduce the impact of conflicts of interest (COIs).[6] However, little work has examined how physicians rationalize acceptance of questionable ties to industry. One of the few studies to do so found that, although physicians interviewed in focus groups appreciated the hazards posed by COIs, they used a variety of strategies to rationalize placing themselves in conflicted situations, including not thinking about the COI, denying an impact on their prescribing behavior, rejecting responsibility for the problem, and using diverse techniques intended to resist or undo bias.[7]

A common rationalization, often heard explicitly from physician colleagues, is that physicians are entitled to gifts because they are overworked and underpaid, given the time, money and effort that went into their training. A study of third year medical students found that 80.3% believed they were entitled to gifts from industry due to hardships, described as "considerable debt and minimal income" [8]. Adams' 'equity theory' postulates that individuals who feel underpaid are likely to respond by lowering their input (i.e. their work contributions) or by attempting to raise their rewards [9]. Brian Palmer, the former president of the American Association of Medical Students, in his testimony at a 2008 meeting of the IOM Committee on Conflicts of Interest in Medical Research, Education and Practice, noted that: *"The training is difficult... people feel beaten down. They are overworked, they have got hundreds of thousands of dollars of debt. You have an industry that has figured out how to capitalize on that by saying, oh, doctor, can we do that for you, you deserve it. It fuels an entitlement that we all long for that*

we are worth it… The only way really to rationalize accepting all this is to say, I deserve it…" [10].

In other words, the pharmaceutical industry may recognize the value of treating doctors well, and doctors in return may well think that they are worthy of that treatment. These justifications could override reservations about the inappropriateness of accepting gifts.

We examine whether the causal mechanism articulated by Palmer is in fact a likely contributor to the widespread acquiescence to acceptance of gifts by testing whether subtle priming of the sacrifices residents have made to gain their training, such as lack of sleep, long hours, and low salary, serves as an implicit justification to accept gifts from industry. Indeed, research has shown that medical students endorse the idea that hardships can justify acceptance of gifts but it has not documented a causal connection (or even correlation) between the perception of hardship and attitudes toward the acceptance of gifts. To test for a causal connection, we conducted a randomized study to examine whether early career physicians reminded of personal sacrifices, and hence provided with implicit justifications for ethically questionable behavior, would evaluate that behavior as more acceptable. We also tested whether providing a suggested potential rationalization (that inadequate compensation and poor working conditions might justify accepting gifts) further increases the reported acceptability of gifts.

METHODS

Participants

We recruited from 2 medical resident populations to achieve a minimum target of 300 residents, consistent with power calculations (presented below). The first sample was pediatrics residents from the Children's Hospital of Pittsburgh collected during March, 2009. All 100 residents received 3 email requests from the chief pediatric resident encouraging them to

complete a 3 minute survey and offering each a $20 online shopping voucher if more than 80% responded.

The second sample consisted of family medicine residents. Pediatricians are less likely than family physicians to receive samples, reimbursements, and payments for professional services from industry;[11] therefore the inclusion of the family medicine resident sample increases the generalizability of the results. Six email requests containing a link to the surveys were sent to family medicine residency directors via the program director for the Forbes Health System: the first 3 in April 2009 to 30 Pennsylvania family medicine residency directors (representing potential access to 600 family medicine residents), and the next 3 in July 2009 to approximately 420 family medicine residency directors in rest of the United States. The emails requested that residency directors forward the information to their residents. For this sample, the incentive for responding was a portable media player for every 1 in 100 respondents. Because we had no direct contact with the family medicine directors, we could not establish how many residents ultimately received the solicitation.

Procedure

The introduction to the Physician Values survey cast it as collecting information on quality of life, expectations, and values, and did not mention COIs so as to disguise the purpose of the study. Participation was voluntary, confidentiality was assured, and the survey was short enough to be completed in approximately five minutes.

The three main conditions were sacrifice-reminder, suggested-rationalization and control (FIGURE 1). In the *sacrifice-reminders* group, physicians were asked about the sacrifices they had made to obtain their medical education. In the *suggested-rationalization* group, physicians first

answered the same sacrifice questions, then were asked whether they agreed or disagreed (on a 5-point Likert scale) with the statement: "Some physicians believe that the stagnant salaries and rising debt levels prevalent in the medical profession justifies accepting gifts and other forms of compensation and incentives from the pharmaceutical industry." Next, both groups were asked a series of questions, mainly about the acceptability of receiving gifts from industry. In the *control* group, physicians were asked these questions before the sacrifice questions. In the sacrifice-reminders and control groups, agreement with the rationalization was elicited at the end of the questionnaire. *Agreement with the rationalization* was defined to include "neither agree nor disagree", "agree" and "strongly agree,"

Sacrifice-reminder Questions

Six questions were intended to remind physicians of sacrifices they made to obtain their medical training, including hours worked, hours of sleep, salary, and education-related debt. Those in the sacrifice-reminders and suggested-rationalization groups were further randomly assigned to *feel-rich* and *feel-poor* subgroups designed to manipulate the degree of perceived sacrifice (FIGURE 2). Because the mean salary for residents is around $42k and the mean hours of sleep while on-call is approximately 2.5 (determined from the pilot described below), the response categories for salary and sleep were varied to give high or low category mean responses. The high categories ensure that more physicians answer in lower response options than those receiving the low categories; e.g., for the feel-poor subgroups, the first category for salary is $0-$100k and final category $350k+, versus $0-$20k and $50k+ respectively for the feel-rich subgroups. To enable us to compare responses between the groups, the control group was also randomized to feel-rich and feel-poor subgroups but these questions were asked after

the dependent variable was collected so this randomization did not constitute an experimental manipulation.

The final question in this section, "How do you feel about your working conditions?" served as a manipulation check for the feel-rich and feel-poor subgroups. *Poor working conditions* was defined as those who responded "okay", "bad" and "very bad". It was expected that those in the feel-poor subgroups would feel worse about their working conditions.

Conflicts-of-interest Questions

The scale eliciting attitudes towards COIs consisted of 10 items querying the acceptability of different practices, with responses ranging from 1 (strongly agree) to 5 (strongly disagree). To disguise the survey's true focus, the COI questions were interspersed with questions addressing quality of life and ethical issues arising in medicine. The severity of the COI gradually increase by question order to avoid immediately triggering respondents' suspicions about the purpose of the survey. For example, the first question, regarding attending corporate sponsored continuing medical education sessions, is something generally considered acceptable within the medical community. The final three questions address accepting industry gifts such as medical equipment followed by accepting gifts such as office stationary, which is then followed by the more contentious acceptance of gifts for personal use.

The survey was pretested on a sample of 5 physicians. Protocol analysis was used to refine question wording and examine appropriateness of response categories. A pilot, without incentives for participation, was then conducted on 73 internal medicine residents in 3 Pittsburgh

hospitals (Shadyside, Montefiore, and Veterans Affairs) to assess the appropriateness of the

sacrifice manipulation and the reliability of the scale.

Sample Size

Upon clicking the link to participate, each physician was randomized by a computerized

random number generator (using a uniform distribution) to 1 of 5 conditions: sacrifice reminders

(rich and poor), suggested rationalization (rich and poor) and control. Using variance estimates

from the pilot group, a target sample size of 300 residents (n=60 for 5 conditions) provided 90%

power to detect a difference of .25 between population means, 1/20 of the range of the 1-5 scale.

With 93 responses from Children's Hospital, we set a target of 210 responses from family

medicine residents, and closed the family medicine survey after 230 responses.

Statistical Analysis

The main dependent variable measure, the 'acceptability of receiving gifts' was a score

ranging from 1-5, determined from the (reversed) average score from the ten COI questions.

Each COI question can be examined separately with respect to the independent variable;

however single item measurements are less reliable,[12] and analysis of the pilot data revealed high

scale reliability (Cronbach alpha = .85) for the ten questions.

The main analyses consisted of ANOVA and regression models on the main dependent

variable (acceptability of gifts) across conditions. The first regression model included dummy

variables for the sacrifice-reminders condition and for the suggested-rationalization condition.

Analyses were conducted on the whole sample and also separately for the two samples

(Children's Hospital and family medicine). The second model added further variables to gain a

more specific picture of the factors that are associated with gift acceptability; this model added a dummy variable for agreement with the rationalization statement, and interactions between conditions (sacrifice-reminder and suggested-rationalization) with this dummy variable. In order to further examine the effect of feeling deprived, the final model included dummy variables for the suggested-rationalization, sacrifice-reminders and perceived poor working conditions.

In addition to regression coefficients, we also report, when appropriate, comparative percentages and chi-square statistics. To explore differences between the samples and conditions, and to check manipulations, we used ANOVA, chi-square tests, and logistic regression. Before conducting ANOVAs, we tested for equality of variances across groups using the Levine test for homogeneity, and checked for non-normality. $P< .05$ was considered statistically significant. All tests were 2-sided. Data were analyzed using SPSS 16.0 (SPSS Inc, Chicago, Illinois).

RESULTS

Excluding non-residents and respondents with incomplete data, the final sample consisted of 301 residents, 90 from Children's Hospital (93% response rate before exclusions) and 211 family medicine residents. The family medicine resident sample included responses from 26 different states and 65 hospitals/medical centers (with 1 to 12 residents per hospital). Aggregating across both samples, 95% were residents in the first three years. Similar to the pilot, reliability analysis yielded a Cronbach alpha of .90 for the 10 questions.

Differences between samples and randomized groups

There were no significant differences between the Children's Hospital and family medicine residents in working hours, salary, not on-call sleep, whether they borrowed money to

fund their education, agreement to the rationalization, and acceptability of gifts. However, relative to pediatrics residents, family medicine residents were more likely to be male ($P<.001$), in their first year ($P<.001$), report sleeping more hours when on-call ($P<.001$), and feel better about their working conditions ($P=.001$).

Consistent with successful randomization, there were no significant differences between the 3 randomized groups in reported post-graduate year, working hours, salary, sleeping hours, education-related debt, and how they felt about their working conditions. As intended, there were significant differences in the salary and sleep items between the feel-rich and feel-poor subgroups, such that more responses were in the lower categories (1 or 2) in the feel-poor than in the feel-rich subgroups. For salary, 100% of those in feel-poor subgroups responded in the lower categories vs 2% for those in feel-rich subgroups ($\chi^2 = 290$; $P < .001$); similarly for on-call sleep, 100% of those in the feel-poor subgroups responded in lower categories vs 35.9% of those in feel-rich ($\chi^2 = 186$, $P < .001$); for not on-call sleep, 69.6% responded in lower categories for feel-poor vs 1.3% for feel-rich ($\chi^2 = 275$, $P < .001$).

Of the physicians surveyed, 94% felt their working conditions were okay, good, or very good on a 5-point scale ranging from very bad to very good. Only 6% reported bad or very bad working conditions. The results of the rich-poor category manipulation on the sacrifice questions were consistent with the intended influence on how physicians felt about their working conditions. Poor working conditions were reported by 50.0% of those in the feel-poor subgroups compared with 37.3% in the feel rich subgroups ($\chi^2 = 4.97$; $P= .03$).

Rationalization statement

Of the residents, 37.5% agreed with the rationalization. More agreed with the rationalization statement in the suggested-rationalization group, 47.1%, (in which the statement came immediately after the sacrifice questions but before the COI questions), compared to those who received it at the end of the survey in the control or sacrifice-reminders groups, (30.0% and 31.7% respectively; $\chi^2 = 7.94$; $P= .02$). Respondents who reported poor working conditions were more likely to agree with the rationalization, 45.0%, than those who reported favorable working conditions, 31.8%, ($\chi^2 = 5.56$; $P= .02$).

Acceptability of receiving gifts

All 10 of the COI items shifted in the predicted direction across groups; for all 10 items, mean gift acceptability was highest in the suggested-rationalization group and lowest in the control group. Consistent with the main prediction of the study, a univariate analysis of variance for our main outcome measure (willingness to receive gifts) revealed a highly significant difference in the acceptability of receiving gifts across the different experimental conditions (control $M= 2.86$; sacrifice-reminders $M= 3.13$; and suggested-rationalization $M= 3.44$; $F_{(2, 298)}= 14.71$, $P < .001$, FIGURE 3). Planned comparisons revealed that those in the sacrifice-reminders group were significantly more likely to view gifts as acceptable compared to those in the control group ($t = 2.39$, $P = .02$), and those who received the suggested-rationalization were significantly more likely to find gifts acceptable compared with the sacrifice-reminders group ($t = 3.47$, $P = .001$).

Similarly, the first regression model, containing only variables for the main conditions (suggested-rationalization and sacrifice-reminders), found significant main effects for reminding physicians of sacrifices made in obtaining their education ($B = .27$, 95% CI, .05 - .49; $P= .02$),

and for the suggested rationalization (B = .58; 95% CI, .36 - .80; P< .001). Results were similar when analyses were conducted in each resident subgroup (TABLE 1).

In a more detailed model that included covariates for agreement with the rationalization, and interactions between agreement with the rationalization and the sacrifice-reminders and suggested-rationalization conditions, gift acceptability was positively and significantly related to agreement with the rationalization (B = 1.03; 95% CI, .68 - 1.38; P< .001). The interaction between agreement and the suggested-rationalization (B = -.53; 95% CI, (-.94) – (-.11); P= .01) was significant and the interaction between agreement and the sacrifice-reminders (B = -.38; 95% CI, (-.81) - .05; P= .08) was marginally significant (TABLE 1). The pattern of main effects and the interaction is depicted in FIGURE 4. For those who accepted the rationalization, gift acceptability was uniformly high in all three experimental groups. In contrast, for those who rejected the rationalization the experimental manipulations for sacrifice-reminders and suggested-rationalization had a substantial effect on gift acceptability.

An additional model, which included dummies for the sacrifice-reminders, suggested rationalization and poor working conditions, found that perceived poor working conditions increased gift acceptability (B = .19; 95% CI, .02 - .35; P=.02).

COMMENT

Consistent with predictions generated by Palmer's speculation, implicit reminders of sacrifices and suggested rationalizations both led to more positive attitudes toward acceptance of gifts. Even though few residents reported that their working conditions were bad, reminding them about sacrifices to obtain their medical education significantly increased their readiness to receive gifts. Providing a suggested rationalization that low salaries and education-related debt

could potentially justify accepting gifts increased the acceptability of industry-sponsored gifts beyond the effect of simple sacrifice reminders.

Furthermore, agreement with the rationalization statement was strongest when it immediately followed the sacrifice reminders, indicating that feelings of hardship can increase justifications for ethically questionable behavior. Although those who agreed more with the rationalization were more likely to view receiving gifts as acceptable, those who *disagreed* with the rationalization were most vulnerable to the influence of sacrifice reminders and the suggested rationalization. This suggests that "because you're worth it" primes, such as those provided by sacrifice-reminders and suggested-rationalizations, are especially effective for those who would, in their absence, be least likely to accept gifts.

The justifications may not occur on a conscious level, since most respondents denied that their working conditions were poor and explicitly rejected the suggested rationalization. Also, as demonstrated by the effect of the feel-poor manipulation, the quality of working conditions is itself a subjective judgment, and one that can potentially be used to support subconscious rationalizations to accept gifts. Residents' rate of agreement to the rationalization in our study (37.6%) was much lower than that previously found in medical students (80.3%).[8] However, the more deprived that physicians felt (as determined by reporting poor working conditions), the more likely they were to agree with the rationalization; and the more likely they were to report gifts as acceptable.

Research on self-serving bias suggests that people's view of what is fair is often biased in the direction of what benefits them personally.[13] Applied to COIs, the self-serving bias is likely to increase feelings of entitlement and disarm reservations that might otherwise arise about acceptance of gifts. Moreover, people are generally not aware that they are subject to a self-

serving bias, which means that physicians are unlikely to recognize that they have been influenced by gifts.[14] Furthermore, individuals often engage in minor forms of unethical behavior, falling short of behaviors that are sufficiently extreme to negatively affect their self-concept of being an honest person,[15] and research on reciprocity suggests that favors given are likely to be paid back.[16,17] Clearly, there are important psychological factors operating to weaken physicians' compunctions about accepting, or altering their behavior in response to, gifts.

Limitations of this study were the self-reported nature of the data and the possible nonrepresentativeness of one of the samples. The 93% response rate from the Children's Hospital sample ensures an adequate representation of residents from one hospital. The family medicine sample was added to increase power and enhance the generalizability of the results by including residents from another specialty. As we were testing a causal mechanism via experimental design, the use of blind randomization should produce comparability between groups, thus reducing the effect of response bias even if the sample is not perfectly representative of the larger population. Also, separate analysis of the samples revealed similar results. So, although the effects of sacrifice primes and rationalizations might not be equivalent in a different sample, there is no reason to believe that these effects would not generalize to other populations of medical residents.

In summary, financial self-interest may not fully explain physician's acceptance of gifts. Rather, such acceptance may be facilitated by rationalizations and resulting feelings of entitlement. These findings have implications for addressing COI. They suggest that measures to improve the perceived quality of working conditions and morale of junior doctors could potentially have a beneficial effect. However, a more direct approach would be for medical training to include critical discussion of these types of justifications, in an attempt to disarm them

before they come into play. Research has documented that gifts are widespread[11] and can influence physician prescribing behavior.[1,18] This study helps explain how well-intentioned physicians may use subjective perceptions of hardships to rationalize acceptance of such potentially biasing gifts. If acceptance of COI become less prevalent, the same ethical norms that currently favor the acceptance of gifts could gradually change, ideally leading to a culture that views gifts as bribes rather than as deserved rewards received as compensation for hardships.

Additional contributions

References

1. Wazana A. Physicians and the Pharmaceutical Industry: Is a Gift Ever Just a Gift? *JAMA*. 2000;283(3):373-380.

2. Campbell EG. Doctors and drug companies–scrutinizing influential relationships. *N Engl J of Med*. 2007;357(18):1796.

3. Fugh-Berman A, Ahari S. Following the Script: How Drug Reps Make Friends and Influence Doctors. *PLoS Med*. 2007;4(4):621.

4. Steinman MA, Bero LA, Chren MM, Landefeld CS. Narrative Review: The Promotion of Gabapentin: An Analysis of Internal Industry Documents. *Annals of Internal Medicine*. 2006;145(4):284.

5. Steinman MA, Harper GM, Chren M, Landefeld CS, Bero LA. Characteristics and Impact of Drug Detailing for Gabapentin. *PLoS Med*. 2007;4(4):743.

6. Brennan TA, Rothman DJ, Blank L, et al. Health industry practices that create conflicts of interest: a policy proposal for academic medical centers. *JAMA*. 2006;295(4):429-33.

7. Chimonas S, Brennan TA, Rothman DJ. Physicians and Drug Representatives: Exploring the Dynamics of the Relationship. *J of Gen Intern Med*. 2007;22(2):184-190.

8. Sierles FS, Brodkey AC, Cleary LM, et al. Medical students' exposure to and attitudes about drug company interactions: a national survey. *JAMA*. 2005;294(9):1034-42.

9. Adams JS. Inequity in social exchange. *Advances in experimental social psychology*. 1965;2(267-299).

10. Palmer B. *Meeting 3 of the Committee on Conflict of Interest in Medical Research, Education, and Practice*.; 2008.

11. Campbell EG, Gruen RL, Mountford J, et al. A national survey of physician-industry relationships. *N Engl J of Med*. 2007;356(17):1742-50.

12. Nunnally JC, Bernstein IH. *Psychometric theory*. McGraw-Hill, New York; 1994.

13. Babcock L, Loewenstein G, Issacharoff S, Camerer C. Biased Judgments of Fairness in Bargaining. *American Economic Review*. 1995;85:1337-1343.

14. Dana J, Loewenstein G. A Social Science Perspective on Gifts to Physicians From Industry. *JAMA*. 2003;290:252-255.

15. Mazar N, Amir O, Ariely D. The dishonesty of honest people: A theory of self-concept maintenance. *Journal of Marketing Research*. 2008;45(6):633-644.

16. Montague R. The Perspective from Neuroscience. The Scientific Basis of Influence and Reciprocity: A Symposium. 2007. Available at: http://www.aamc.org/research/coi/start.htm.

17. King-Casas B, Tomlin D, Anen C, et al. Getting to know you: reputation and trust in a two-person economic exchange. *Science*. 2005;308(5718):78.

18. Zipkin DA, Steinman MA. Interactions between pharmaceutical representatives and doctors in training. *J of Gen Intern Med*. 2005;20(8):777–786.

Figure 1: The Three Main Conditions

The *sacrifice-reminders* condition presents sacrifice questions before gift acceptability questions. The *suggested-rationalization* condition presents the same sacrifice questions, then the rationalization, before gift acceptability questions. The *control* condition presents gift acceptability questions before sacrifice questions.

SACRIFICE REMINDERS

Sacrifice Questions
- Hours worked
- Hours of sleep (on-call/not on call)
- Salary
- Education-related debt
- Working conditions

COI Questions

Suggested Rationalization
(As in suggested-rationalization condition)

SUGGESTED RATIONALIZATION

Sacrifice Questions
(As in sacrifice-reminders condition)

Suggested Rationalization
"Some physicians believe that the stagnant salaries and rising debt levels prevalent in the medical profession justifies accepting gifts and other forms of compensation and incentives from the pharmaceutical industry. To what extent do you agree or disagree that this is a good justification?"

COI Questions

CONTROL

COI Questions

Sacrifice Questions
(As in sacrifice-reminders condition)

Suggested Rationalization
(As in suggested-rationalization condition)

Figure 2: Feel rich and feel poor conditions

Feel-rich condition: medical residents feel less deprived

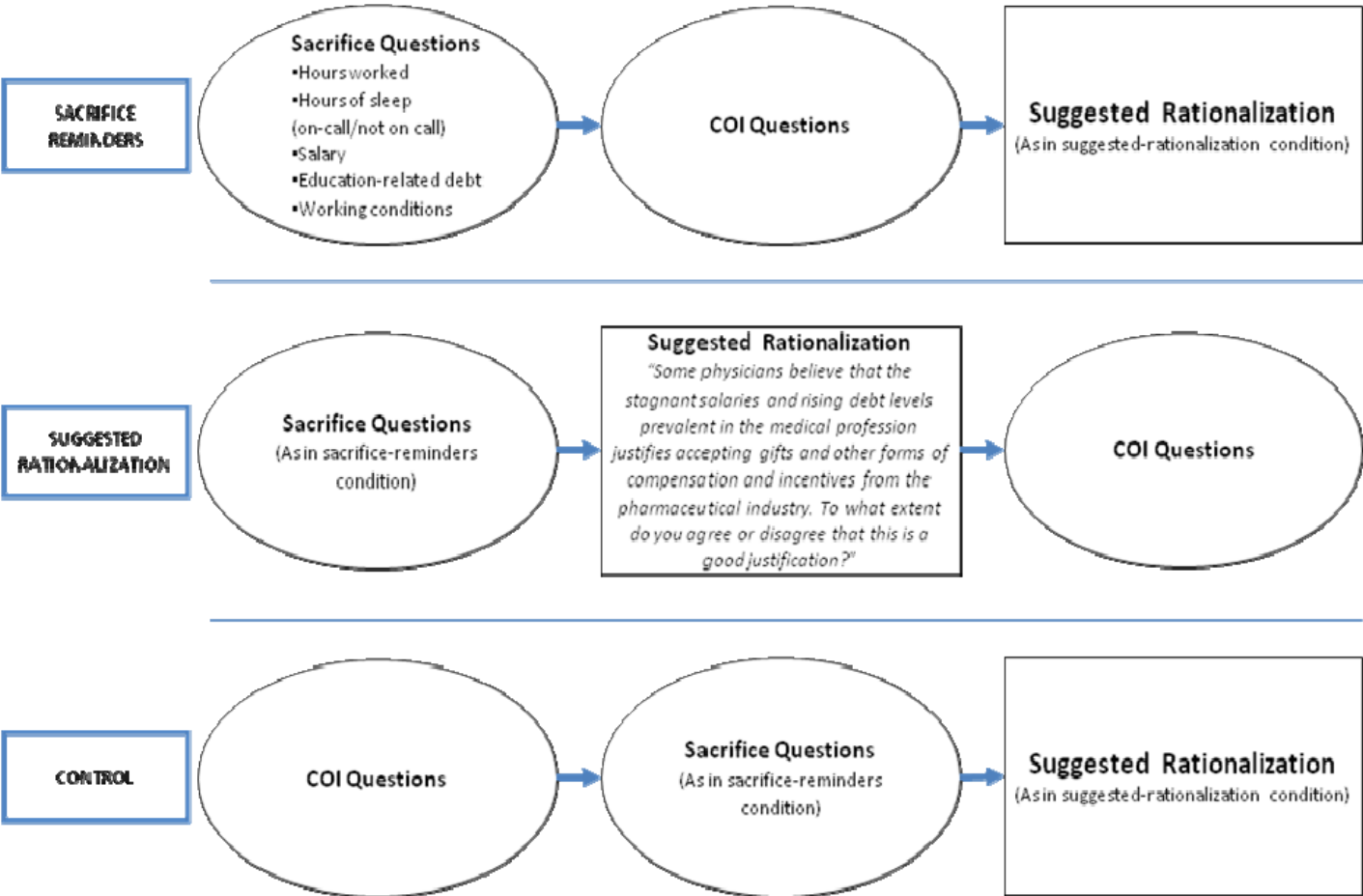*Feel-poor condition: medical residents feel more deprived*

Figure 3: The acceptability of receiving gifts by condition

Contrast analysis confirmed that the sacrifice-reminders condition resulted in a higher

acceptability of receiving gifts than control (P= .02), and the suggested-rationalization condition

had higher gift acceptability than sacrifice-reminders ($P < .001$).
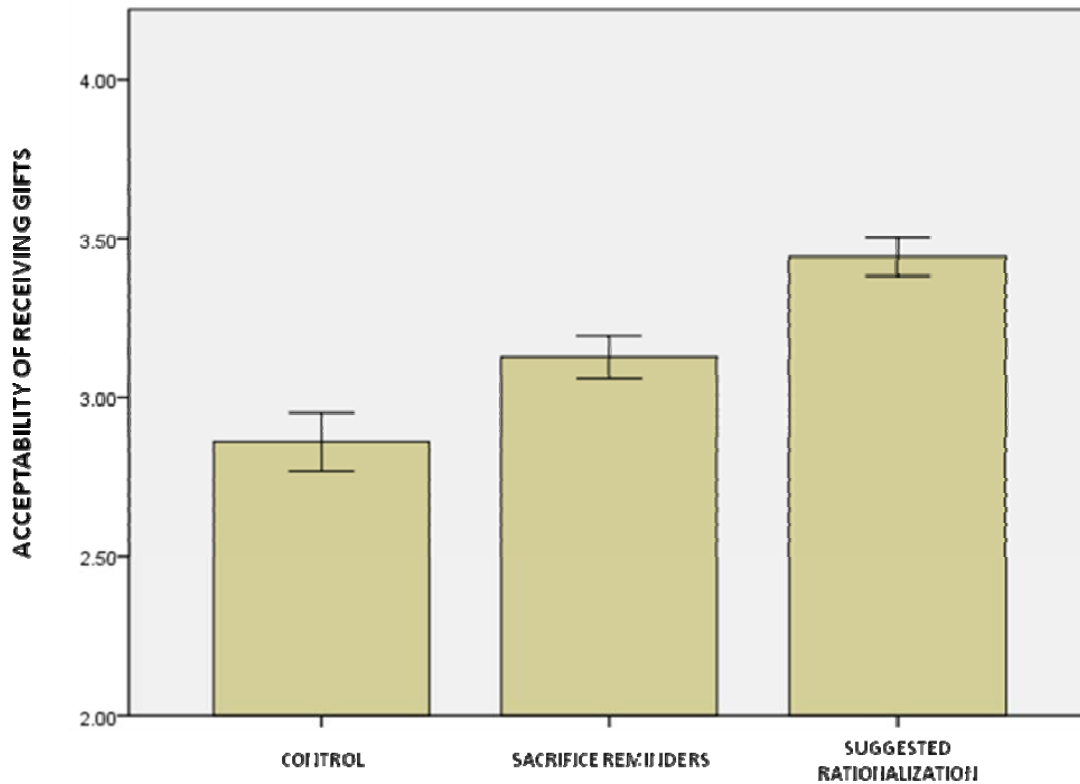
Figure 4: Acceptability of Receiving Gifts by Condition and Agreement to Rationalization

Those who agreed with the rationalization were more likely to accept gifts. Those who disagreed with the rationalization were more likely to change their response about the acceptability of receiving gifts when they receive sacrifice-reminders or a suggested rationalization.
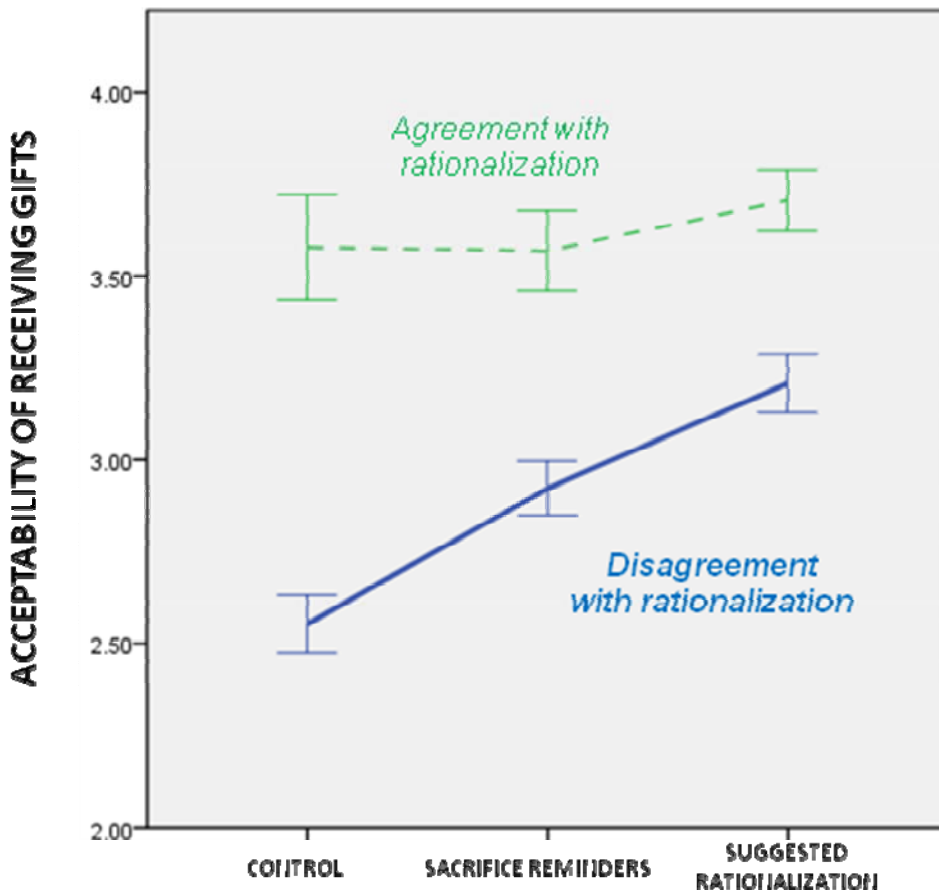
Error bars: ± 1 Standard Error.

Table 1: Regression models for acceptability of accepting gifts.

	Model 1 (full sample)	Model 1 (CH only)	Model 1 (FP only)	Model 2 (full sample)
Sacrifice-reminders condition	.27[*] (.11) [.05-.49]	.13 (.18) [(-.23)-.49]	.32[*] (.14) [.05-.59]	.37[**] (.12) [.13-.61]
Suggested-rationalization condition	.52[***] (.11) [.36-.80]	.45[*] (.18) [.09-.80]	.63[***] (.14) [.36-.91]	.66[***] (.13) [.41-.90]
Agreement with rationalization				1.03[***] (.18) [.68-1.38]
Agreement with rationalization*Sacrifice-reminders				-.38 (.22) [(-.81)-.05]
Agreement with rationalization*Suggested-rationalization				-.53[*] (.21) [(-.94)-(-.11)]
Constant	2.9[***] (.09) [2.7-3.0]	2.8[***] (.14) [2.5-3.1]	2.9[***] (.12) [2.7-3.1]	2.6[***] (.10) [2.4-2.7]
N	301	90	211	301
R^2	.09	.08	.10	.28
F statistic	$F_{(2,298)}=14.71$[***]	$F_{(2,87)}=3.69$[*]	$F_{(2,208)}=11.01$[***]	$F_{(5,295)}=23.30$[***]

coefficients, standard errors and confidence intervals in entries
* p<.05; **<.01; ***<.001

Abbreviations: CH = Children's Hospital; FP = Family Practice resident