

## Mr. & Mrs.: A Social Cognitive Approach to Understanding How the Marital Context Influences Physical Activity

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### Abstract

Recent literature has demonstrated the power of marriage in influencing spousal physical activity behavior, yet the relationship between marriage and activity is not fully understood. The purpose of this qualitative study was to add to current literature by examining the mechanisms within the marital context that may influence physical activity. Employing constructs of Social Cognitive Theory to guide the inquiry, researchers used the qualitative techniques of in-depth interviews, photo elicitation and field notes to gather data in 2012 from twelve spousal pairs (n=24 participants). Results indicated verbal persuasion by husbands encouraged wives, yet verbal persuasion by wives was perceived as nagging by men. Verbal persuasion by husbands increased a few of wives' sense of self-efficacy (25%), yet the majority of women (83%) felt that persuasion increased *motivation*, not necessarily confidence. Results also highlighted the power of modeling to increase husbands' physical activity. Overwhelmingly, men reacted less positively to verbal persuasion than modeling (75%). This study demonstrated the utility of Social Cognitive Theory in advancing our understanding of spousal physical activity and underscored the need for health professionals to consider the marital dyad when designing health interventions.

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### Introduction

After saying "I do," married individuals begin tangibly and intangibly fusing their lives together. This merging, along with the close nature of the relationship, inevitably influences each spouse in a multitude of ways. Yet, spousal influence is often subtle and varied. Is it what someone said (verbal persuasion) or what someone saw (modeling) or something else (e.g. environmental factors) that influenced behavior?

A survey conducted by the Centers for Disease Control and Prevention [CDC] (2004) demonstrated a clear and striking association between marital status and health. Falba and Sindelar (2008) investigated the power of marriage partners and concluded the influence of marriage

extends to health behavior. Research has indicated a clear spousal influence on health, yet an ambiguous influence on physical activity, specifically. In a study with newly married couples, Craig (1990) found that marriage coincided with decreasing exercise levels for both spouses. Yet, according to the CDC (2004), married adults were more likely to be physically active than unmarrieds. Turner and Marino (1994) concluded social support within marriage raised physical activity levels.

### Statement of Purpose

Due to such varying reports, the influential relationship between marriage and physical activity is currently unclear. Why does physical activity increase in some marriages and decrease in others? What are the mechanisms influencing physical activity in a marital context? Thus, the overarching

purpose of this study was to answer the central question: How does the marital context influence physical activity in spouses?

Since the previous research has been mixed, we employed qualitative research methods to answer our central research question. Specifically, we conducted individual interviews and utilized photo-elicitation. Our desire was to elicit creative and visual responses to our research questions by asking participants to not only supply verbal responses to interview questions but also visual data. Qualitative data gathered via photo-elicitation and interviews is often used to lay the groundwork for future quantitative studies.

### **Theoretical Framework**

Bandura's Social Cognitive Theory (SCT) (1989) provided a theoretical lens through which the relationship between marriage and physical activity could be better understood. SCT was built under the assumption that people do not live as isolated individuals. Bandura created the concept of reciprocal determinism by asserting a person's behavior both influences and is influenced by personal factors and the social environment (Bandura, 1986). Bandura (1989) represented this "cognitive dialogue" as a triad in which the environment, behavior, and personal factors all impact human behavior.

**Self-Efficacy.** The goal of this study was to better understand spousal influence on a specific behavior: physical activity. Along with the personal factors and the social environment, Bandura (1986) stated behavior was largely dictated by self-efficacy or the belief in one's confidence to perform a given behavior. SCT predicts spousal impact on his or her partner's self-efficacy in two ways: verbal persuasion and

vicarious modeling. Thus, a spouse's sustained persuasion could possibly alter the other person's self-efficacy. However, if a husband continually persuaded his wife to exercise, might she view this as an indirect slight? Similarly, would a man tire of his wife's cajoling to be more active? To answer these questions, the first objective of this study was to: gain a better understanding of how verbal persuasion influences physical activity self-efficacy in married individuals.

Along with persuasion, Bandura predicted the modeling of one spouse as influential in altering the thoughts and actions of the other (1989). If a man observed his wife beginning to exercise consistently and simultaneously exhibiting a more energetic disposition, he may begin to think he could also exercise and enjoy similar outcomes. Therefore, our second objective was to: explore if/how modeling impacts spousal self-efficacy regarding physical activity.

While our research objectives and initial theoretical framework remained unchanged throughout the course of this study, we did leave room for other explanations. For instance, if participant data revealed a differing theoretical explanation, we were open to exploring alternate ways of understanding the relationship between marriage and activity. To this end, our third objective was to investigate what other factors may influence physical activity for married couples.

## **Methods**

### **Study Design**

To answer these objectives, we employed a basic qualitative research design by using individual interviews and photo-elicitation. After receiving approval from the Texas A&M University Institutional Review

Board, we distributed flyers in College Station, Texas to recruit participants. We then assigned participant pseudonyms in our interview transcripts to ensure confidentiality.

### **Participants**

For participant selection, we utilized snowball (or network) purposive sampling. The purpose of this sampling was to first identify key informants who met criteria. We then asked those participants for names of individuals who shared the phenomena of interest (Merriam, 2009). Overall, 58 potential participants were contacted, and 24 individuals consented and thus represented our final sample.

### **Inclusion Criteria**

We based selection criteria on the theoretical framework and literature review. The first criterion was marriage; specifically, individuals who were both in their first marriage. Second, we chose both partners for this sample due to the gender differences regarding how men and women perceive verbal persuasion and modeling. If both spouses were not available for interview, the couple was excluded from our study. Findings from Fernandez-Ballesteros, Diez-NA, Caprara, Barbaranelli, and Bandura (2002) indicated there is most likely a gender and age difference regarding efficacious beliefs. Third, the sample included couples representing different stages within marriage: early marriage (married 0-5 years), mid-marriage (married 6-20 years), and late marriage (married 21 or more years).

In order for the sample to be similar in racial makeup to the state of Texas, U. S. Census data guided the purposive sampling. According to the 2010 Census, 70.4% of Texans were white, 37% Hispanic, 11.8% Black or African American, and 3.8% Asian

(United States Census, 2010). We came very close to maintaining these ratios in our sample with the exception of Asian Americans. 53% of our sample identified as Caucasian with Hispanic and African-American individuals comprising 33% and 8% respectively. An example of our sampling frame can be found in Appendix A. One individual identified as Native American, and he represented 4% of the total sample size. While no participants identified as Asian American, we did interview one Native American individual.

### **Exclusion Criteria**

Couples were excluded from the study if they were not married or had been previously married. While the influence of cohabitating couples on physical activity habits may be significant, empirical data from a 2004 CDC survey revealed married and cohabiting couples do not share similar health outcomes. Thus, we included only married individuals. We also excluded individuals in homosexual, bisexual or transgender partnerships. While there is certainly a need for more studies focused on the various domestic partnerships, this study narrowed the focus to only heterosexual couples.

### **Measures**

First introduced in 1967, Collier explained photo elicitation as the process of asking participants to take photos of a phenomenon prior to an interview, and then describe why they chose to take certain photos. Clark-Ibanez (2004) stated photo elicitation uniquely describes and communicates lived experiences.

According to Erlandson et al. (1993), qualitative researchers should use trustworthy documents to ensure the rigor, dependability and transferability of research findings. We used several trustworthy

documents and techniques. First, we gathered data from three sources (notes, interviews, and photos) for the purpose of triangulation. To ensure the credibility of the findings, we created a peer-debriefing memo with a list of participant demographic variables and potential categories. A full professor at Texas A&M University then reviewed these categories to ensure validity of the data. Additionally, we organized interview data into an audit trail to trace the original data back to the extrapolated categories so that the data would be dependable.

### **Procedures**

Prior to the interview, we contacted participants and asked each person to take two or three pictures representing how his or her marriage influences physical activity. All photographs were taken with the participants' own digital cameras. Participants then emailed their photographs to the lead author. All photos were printed prior to the interviews.

Next, we conducted hour-long interviews in participants' homes. In order to reduce bias in responses, couples were interviewed separately. To begin each interview, participants described the pictures they chose to take. We also collected data using observational notes and photo elicitation. All data was gathered in 2012.

### **Analyses**

After transcribing the interviews verbatim, we employed the constant comparative method to guide our analysis (Glaser & Strauss, 1967). Specifically, we focused on comparing husbands' and wives' responses in order to analyze the gender differences in our sample. First, we reviewed each interview and photograph keeping in mind our research objectives. We then open coded data for themes. For photographs, we coded

both the photo itself and participant comments regarding each picture. Next, we placed the pieces of coded data from both interviews and photos into potential categories and subcategories. After that, the analysis from the first interview guided the coding for the subsequent transcripts. We conducted a round of axial coding to refine categories. Axial coding is the process of relating categories to their subcategories by identifying a central characteristic/ theme/ phenomenon (the axis) around which to aggregate data (Merriam, 2009). This type of coding was more reflective and conceptual than merely descriptive open coding (Lincoln & Guba, 1985). Axial coding helped create abstractions from the data to ensure categories were interpretive and reflexive.

### **Results**

Overall, we coded forty-five photographs and seventy-eight pages of interview transcripts. The study sample consisted of twelve couples. To maintain confidentiality, all participants' names were changed, and we used initials to identify participants in text. The average length of marriage in the sample was 15.48 years, and the average age of participant was 40.6. Three couples had no children, four had children under the age of five, one couple had children ages 6-17, and four had children over the age of 17. Five couples were married five years or less, three couples were married 6-20 years, and four couples were married 21 or more years. While number of children and years married were the same for each couple, ethnicity and education level varied within each dyad. Thus, the individual data for ethnicity and education follows below.

Regarding education, 25% held high school diplomas, 37.5% had completed undergraduate college degrees, and 37.5%

had finished graduate programs. The relatively high number of those holding graduate degrees reflected the fact that the research was conducted in a community with a large research institution.

In keeping with the Social Cognitive framework and the idea of reciprocal determinism, the results of the first two objectives corresponded to the behavioral component of the SCT reciprocal triad, while additional results for the latter objective corresponded to the other two points of the triangle, environmental and personal (e.g. social/cognitive) factors (see Appendix B). Additionally, the themes gleaned from participant data are presented *in vivo* or “in their own words.” We organized themes according to the original study objectives (see Table 1).

#### **“When I See Her Exercising, I Take That as a Sign to Get Off the Couch”**

Seven spousal pairs and two other husbands (n=16) commented on modeling, making it the most cited theme (see Table 1). Spousal pairs reported the mutually beneficial effect of modeling. WB expressed, “When I see CB getting ready to go work out, I take that as a sign that it is time to go the gym.” CB indicated modeling as a motivating factor for her as well, “WB is always working out, so I see that, and want to keep up with him.” MG and JG also referred to modeling. MG stated, “My wife rides her bike all the time and when I see her, I usually want to go too.” As one spouse observed the other exercise (or prepare to exercise), he or she was often motivated to engage in activity.

[insert table]

While modeling greatly influenced motivation and behavior, only a few participants indicated a change in confidence (i.e. self-efficacy). When asked “How might your spouse influence your

confidence to be consistently active?” a number of spouses claimed little influence. NA insisted, “There is little my wife could do to raise or lower my confidence to exercise. I have always been active.” Thus, spousal modeling seemed to alter motivation, more than confidence.

#### **“You Are Going to Feel Better”**

Not only what spouses observed, but also what spouses heard impacted activity. The use of verbal persuasion by husbands emerged as the second most cited theme. Ten of twelve wives said their spouses encouraged them to be active for emotional and psychological benefits. AR asserted, “ER will suggest I go work out to take a break from work.” However, not all wives perceived persuasion from husbands as positive. RL said, “It is motivating when ML says I have more energy when I exercise. But sometimes... (pause)... he will tell me I need to work out to get a little more toned (points to thigh) that does not always go over very well (rolls eyes).” RL said she gets angry when her husband uses extrinsic motivation (referencing her physique), and his comments actually discourage her to be active. CB affirmed RL’s remarks, “If WB told me I *had to* be active that would hurt my feelings... (pause)... I would wonder if he was saying I looked out of shape.” These women perceived intrinsic motivation (i.e. increased energy/ happiness) as encouragement, and extrinsic motivation (a more toned appearance) as discouragement.

In addition to an increase in motivation from husbands’ verbal persuasion, three wives cited an increase in confidence or self-efficacy. OJ said her husband “definitely increased her confidence to be active” because of his encouraging words. While only three wives reported an increase in self-efficacy, the majority of wives commented on an increase in motivation.

While husbands tended to use the promise of emotional and/or physical benefits to motivate wives to exercise, wives (n=6) often encouraged exercise in order to gain quality time together. OJ said, "I like walking, but I *really* like being with DJ."

Husbands mentioned their wives used verbal persuasion to increase quality time together, not necessarily to increase husbands' confidence to be physically active. In fact, when asked "what things might your wife do or say to influence your confidence to be physically active," several husbands said "very little" or "not much."

Interestingly, participants said certain forms of verbal persuasion lowered spousal physical activity. Forceful, continuous "encouragement" was often viewed as nagging by a participant's spouse (especially by men). Half of the husbands spoke to this type of persuasion. JN said, "If she kept asking and asking me about it, I probably would not like it." JL said, "She can suggest I work out, but she sometimes crosses a line into nagging." None of the wives reported this sense of nagging.

Spouses also lowered partner physical activity by discouraging overexertion. Every spouse in their forties, fifties, and sixties reported instances in which one partner discouraged activity due to injury or an existing health condition. DC told his wife MC to "slow down a little if [her] arthritis is flaring up." Similarly, JG often urged her husband to not exercise too much because of his existing health condition. This type of protective behavior was similar for both husbands and wives.

### **"So Many Distractions"**

The next theme captured the environmental factors that enabled and/or hindered physical activity. While a few spouses mentioned the

environmental influence of media usage such as internet surfing (n=1) and television viewing (n=2), participants most frequently cited work (n=21) and children (n=15). Those with children under 5 were especially likely to cite children as a distraction, while nearly all participants regardless of life-stage cited work as a barrier.

### **"My Job Consumes Me"**

Twenty-one individuals worked outside the home, and 100% of those participants cited work as a barrier to physical activity. Also, husbands and wives equally referenced work schedules and active jobs as barriers. RL used a photograph to tell the story of her work demands. She explained: "I would like to exercise more, but I am exhausted from work. I put my dress shoes in the middle and my tennis shoes to the side to represent my priorities." Her husband, ML, echoed her, "...with my work schedule, I am too exhausted to exercise." NA took a picture of a road sign to represent his lengthy commute. He added, "It is tough to be active with having such a crazy schedule."

Work hindered couples from being active individually and jointly; both husbands and wives in five spousal pairs mentioned the challenge of managing joint physical activity while working full time. SO stated, "We use to be more active together but the biggest reason we quit was work commitments." GO said, "SO's work and mine have opposite schedules so we just can not work out together."

### **"My Child is My Activity"**

Children presented another environmental influence on marital physical activity, especially for younger participants. However, unlike the overwhelmingly negative impact of work, participants viewed having children as both positively and negatively impacting physical activity.

Every mother (n=9) and a few fathers (n=3) mentioned an increase in activity immediately following the birth of their children. BN said, "When my kids were little I was always chasing them." Spouses who reported low to moderate physical activity before having children were especially likely to perceive an increase in activity after kids (n=3). MA took a picture of her four year old and emphatically stated "He *is* my physical activity. I am much more active after having my son."

While frequency of activity increased, four wives and three husbands also noted a decline in intensity. This was particularly true for participants who claimed to have been moderate to highly active before having children. BN lamented, "I still feel active, but I wish I could run as much as I did." Many of these participants had children who were teenagers or young adults. This decline may be due to aging more than the influence of children.

#### **"We Feed Off Each Other"**

The final theme centered on cognitive and social factors. How spouses related with one another on an interpersonal level directly impacted the way participants thought about activity and vice versa. The theme "It is a head game" was broken down into two subthemes: "We enjoy the quality time" and "It is more for her."

#### **"We Enjoy the Quality Time"**

Four husbands and seven wives indicated the emotional benefit of being active together. CB said, "We work out together so we can have time together." AR captured this idea in a photo she took of her and her husbands' hands. She said, "The hands represent being together. I enjoy walking because I really like talking to ER."

MG's photo depicted him and his wife at an area park and stated, "One of the things we do together is walk. Many times that leads to deeper conversation."

Returning to SCT and the idea of reciprocal determinism, the comments of these participants demonstrated the mutual influence of personal cognitive factors (e.g. the desire for deeper conversation) on behavior.

#### **"It is More for Her"**

While quality time was a major social motivator for spouses, eight participants related husbands were often engaged in activity for their wives' sake (not necessarily because they themselves enjoyed or benefited from an activity). ML said, "When we exercise together, it is more for her than me. I like to lift weights; she likes to do more low impact things. I love her, so I go with her." SM lamented, "CM will play tennis with me, but then will often run three miles afterwards. That bugs me." CM said, "I usually need to do higher level activity." Interestingly, no wives commented that they engage in this type of "sacrificial" exercise. Also, the idea of sacrificial exercise was not limited to a particular life-stage. Instead, the concept was shared by spouses of various ages.

### **Discussion**

The first two objectives of this study examined if and how verbal persuasion and vicarious modeling influenced married individual's self-efficacy to be physically active. The themes "You are going to feel better" and "When I see her exercising, I take that as a sign to get off the couch" captured these thoughts. We divided the first part of our discussion into the following subheadings: Verbal Persuasion, Motivation, Verbal Discouragement, and Modeling. Our third objective, to investigate how the other

two parts of the SCT triad (environmental and social/cognitive factors) influenced behavior, was contained within the themes “So many distractions” and “It is a head game.” We explored these findings under the heading: Environmental Factors.

### **Verbal Persuasion**

Regarding our first objective, verbal persuasion (especially intrinsic motivation) encouraged wives. While a few husbands alluded to external motivation such as an improved appearance, most husbands encouraged their wives by referring to a better emotional state. Wives perceived this type of persuasion as positive, and many reported an increase in motivation. Additionally, a small number of wives stated an increase in self-confidence from their husbands’ use of persuasion. On the other hand, husbands perceived excessive verbal persuasion by wives as nagging and counterproductive. A few husbands reported a slight increase in motivation if their wives used a small amount of persuasion; yet none said persuasion alone increased confidence. Raglin (2001) reported similar findings after interviewing thirty married individuals enrolled in an exercise program. Men in that study responded negatively to verbal persuasion by wives because they felt it was nagging and disrespectful. These findings depart from Umberson (1992). Umberson found husbands perceived verbal persuasion by wives as protective and nurturing.

Taken together, it appears that verbal persuasion in this sample increased motivation for wives and husbands (to a lesser degree), yet had less impact on confidence (i.e. self-efficacy). A few wives reported increased confidence, but no husbands felt that persuasion increased their ability to be active. These results indicated a departure from how verbal persuasion is meant to operate within Social Cognitive

Theory. Within the SCT framework, self-efficacy and motivation are one in the same. However, this sample differentiated between these two concepts.

In our sample, verbal persuasion impacted motivation that then altered behavior. Such a departure from Bandura’s original theory no doubt signals a need for more research in this area.

### **Motivation**

Ryan and Deci (2000) developed Self-Determination Theory by emphasizing the power of motivation to alter behavior by influencing a person’s interest, excitement or confidence (i.e. self-efficacy). While self-efficacy was defined as increased confidence to perform an action in both SCT and Self-Determination Theory, Ryan and Deci’s theory referred to self-efficacy as one factor among many which may be influenced by motivation. Similar to Self-Determination Theory, our findings concerning verbal persuasion pointed to an increase in motivation (especially for women), which then influenced self-efficacy. Thus, motivation appeared to be the mediator between what spouses said and consequent behavior change, not self-efficacy. Again, this variation on how SCT is theorized to operate represents a potential direction for future research.

### **Verbal Discouragement**

Interestingly, many older individuals in this study utilized verbal persuasion to discourage spouses from overexertion. Couples instead encouraged age-appropriate exercise. Beverly and Wray (2010) found couples living with diabetes felt a collective responsibility to encourage one another to engage in appropriate activity. Our findings, in conjunction with Beverly and Wray’s, suggest couples possess a responsibility for



one another and this responsibility extends to physical activity.

### **Modeling**

The second objective, concerning the role of modeling, was cited by three-fourths of study participants. Men, especially, reported the positive impact of modeling. Unlike verbal persuasion which men often perceived as nagging or critical, nine of twelve men said modeling spurred exercise or intention to exercise. While less influential for women, modeling motivated half of sampled wives to at least consider being active with their husbands (if not join them). These findings support Beverly and Wray (2010). Husbands and wives from that study indicated modeling as a strong motivator for physical activity. Observing each other continue an exercise regime motivated spouses to adhere.

Bandura (1986) theorized vicarious modeling alters behavior due to a model being rewarded or punished. However, spouses in this study mimicked one other's actions due to close proximity and the desire for quality time, not only because one spouse was rewarded or punished. Thus, participants responded to modeling, not necessarily *vicarious* modeling.

### **Environmental Factors**

The last objective, to investigate other physical activity determinants, highlighted the idea of reciprocal determinism, or the notion that personal and environmental factors also dictate behavior (Bandura, 1986). Participants reported work as a unilateral negative influence, whereas children tended to increase frequency of activity yet decrease exercise intensity. These findings may give clues as to why literature is unclear concerning whether marriage increases or decreases physical activity.

Lastly, participants noted the desire for quality time together as a strong social factor. While this is fairly intuitive, the existence of sacrificial exercise was unexpected. At first glance, this appears positive, yet wives felt inadequate and frustrated that their husbands were participating in exercise yet were not really enjoying the activity for themselves. To the best of our knowledge, no study to date has focused on the concept of sacrificial exercise. More research is needed to adequately investigate the long-term impact of this type of exercise.

### **Implications for Practice**

Although generalizability in the statistical sense is not possible in qualitative literature (Lincoln & Guba, 1985), our findings suggest the power of marriage to impact the physical activity habits of both individuals. Thus, health professionals may need to create programs specifically tailored to married couples. Incorporating both spouses in a single intervention may yield greater results than engaging only one part of the marital dyad. Practitioners might also utilize verbal persuasion and modeling. For instance, if women respond better to internally motivated persuasion (i.e. increased energy, lower stress), a health educator may emphasize to husbands the need to use internal motivation instead of referencing external appearance. Additionally, health professionals may encourage wives to employ modeling in place of verbal persuasion in an effort to positively influence husbands.

### **Limitations**

One limitation of this study was the inclusion of only married, heterosexual unions. By excluding cohabitating and homosexual couples, we failed to sample individuals involved in every type of intimate relationship. Additionally, our

research was conducted in Texas. Due to regional and cultural differences, these research results are not generalizable to other areas.

### Conclusion

While these limitations are noted, this study does make important contributions to the field of marital physical activity behavior. Marriage is a complex, highly influential relationship and this influence extends to

exercise/physical activity. This sample reported limited verbal persuasion, modeling, and having children (especially for younger couples) as positive determinants to behavior, while work demands, nagging, and exercising for the sake of the other partner as negative determinants. These results support the notion that marital influence is not unidirectional, but rather a synergistic, reflexive dyad.

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## Appendix A

### Sampling Frame Matrix- Racial Distribution by Marriage and Children

YEARS MARRIED	NO CHILDREN	CHILDREN UNDER 5	CHILDREN 6-17	CHILDREN OVER 17
0-5 yrs	B, B, H, H, H, C	H, H, H, H		
6-20 yrs		C, C, C, C	C, C	
21 +				C, C, C, C, C, C, O, H

Key: B- Black/ African-American, C- Caucasian, H- Hispanic, O-Other (Native American)

## Appendix B

### Study Results as Related to Reciprocal Determinism & Reciprocal Triad

