Understanding the Growing Achievement Gap

Between the Sexes: The Power of Mating

on Persistence and Motivations

by

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## **ABSTRACT**

Keywords: achievement gap, Trivers' Parental Investment Theory, dating

In recent years, an achievement gap has emerged between the sexes, with women attending college, earning college degrees, and obtaining high-level jobs significantly more than men (Autor & Wasserman, 2013). The current research seeks to understand the possible reasons behind this phenomenon. According to the Trivers' Parental Investment Theory, women have traditionally been more selective in their mate choices because they have a higher obligatorily investment in offspring. Thus, men traditionally display characteristics that make them appealing as a mate (Trivers, 1972). The achievement gap shows a decline in this behavior, with men achieving relatively less than in previous generations. Since the advent of oral contraceptives, women are empowered to be less selective in their short-term mating partners, and therefore men are no longer motivated to display traditionally desirable traits (education, social status, access to resources, etc.). To test this hypothesis, both male and female participants were primed with information suggesting dating is difficult and requires high achievement/amounts of success or that dating is easy and requires very little achievement/success. Men who were primed to believe that dating is difficult reported elevated levels of persistence and self-control. There were no effects seen among women. These results show support for the hypothesis that a decrease in female selectivity could explain why men are currently underachieving in comparison to previous male generations.

Understanding the Growing Achievement Gap Between the Sexes: The Power of Mating on
Persistence and Motivations

Much has changed in the social, technological, and political landscapes in the United States over the last 50 years. Advances in technology, medicine, and communication have irrevocably changed how this country functions. The most significant change, however, has not come from any of the aforementioned fields. In fact, the change that will have the most lasting impact on American society, the one that has the potential to change how this country operates at its core, is the change in the overarching psyches and roles of the sexes. Picture yourself in any era in history – Ancient Greece, Rome, the Renaissance, the American Revolution – what gender occupies the lead roles? Men, of course. In the United States, men were the sole government officials until 1916, nearly a century and a half after the nation was founded, when the first woman was elected to Congress (Josephson, 1974). Needless to say, men have dominated leadership roles across all domains of life – until now. For the first time in American, and perhaps even global, history, women are vastly outperforming men in multiple domains of life. Today, women are attending college, earning college degrees, and obtaining high-level jobs significantly more than men (Autor & Wasserman, 2013). While the success of the modern woman is undoubtedly due in part to the multiple feminist movements this country has seen, it is also due to a significant change in the behavior of men. It is not just that women are achieving more than men, it is also that men are currently underperforming educationally and professionally as compared to the past. Clearly this broadening "achievement gap" between the genders has the potential to cause major social changes in our society over the next few generations. Therefore, I believe that it is important to scientifically explore the potential reasons behind this occurrence.

# **Previous Explanations of the Achievement Gap**

In their 2013 paper, Autor and Wasserman gave several plausible explanations for the growing achievement gap between men and women. Among these explanations were changes in marriage rates, child rearing circumstances, high male incarceration rates, and others. My hypothesis, however, has yet to be explored. Based on previous research in evolutionary psychology, I suspect the recent achievement gap between the genders can be, at least in part, explained by the changing views on dating and relationships in American culture.

# **Evolution and Mating**

To understand the current social mindset about dating and sex, one must first understand the evolutionary perspective on human mating. Darwin's theory of sexual selection is key to understanding how animals, and specifically humans, choose mating partners. In short, this theory states that sexually reproducing animals will compete both within (intrasexual competition) and outside of (intersexual competition) their own sex for mates (Buss, 1998). For the purpose of this research, I will focus on intrasexual competition. The next key concept to understand for this research is the work of Robert Trivers in 1972. He hypothesized, and later supported, that parental investment is a major player in how the sexes mate and that the sex that is obligated to invest the most in producing and raising offspring will be the choosier sex when it comes to mating. In humans, for example, females have a much higher obligatory level of investment in reproduction than do males, as they are the sex that carries the fetus for nine months and (traditionally) serves as the primary caregiver of for offspring (Trivers, 1972). Thus, women are more selective when choosing a mate than men as they stand far more to lose by making a poor choice. This phenomenon is critical to understanding the intrasexual mating strategies men exhibit. If women are the choosier sex, men should display traits that are

attractive to women so that they will be chosen over other men. Some example of those traits are intelligence, physical attractiveness, physical strength, ability to invest in children, etc. However, as demonstrated by the decline in men's achievement in education and professional pursuits, displays of intrasexual competition in American men have decreased in recent years.

I hypothesize that the growing achievement gap between the sexes is due in part to a decline in women's choosiness. In 1972, the Supreme Court legalized oral contraceptives, or more commonly known as birth control pills, for all women (Francome, 2004). Since that time, women have been given the liberty to engage in sexual relationships without the concern of unwanted pregnancies. Over the course of our evolutionary history, the potential cost to a woman for reproducing with the "wrong" male (i.e. a poor mate/parent) was substantial. But with the advent of modern contraception, women have to worry far less about conceiving due to a sexual encounter. In turn, this shift has inadvertently allowed the modern woman the luxury of lowering her mating standards when it comes to choosing her *short-term* sex partners. Therefore, if women are no longer adamantly "requiring" the traditional traits that increase a man's desirability as a co-parent (i.e. intelligence, access to recourses, etc.) to have sex, why should men display them? According to the growing achievement gap, men are simply not giving forth as much effort as short term mates are abundant, requiring far less to engage in romantic relationships.

### The Current Research

My study sought to support my hypothesis that the decline in male achievement in recent years is due, in part, to the belief that "dating" (accessing a partner to have sex with) is "easy" (does not require the display of evolutionarily attractive traits). To do so, I presented both men and women with information that either suggested dating was easy or that dating was difficult. I

predicted that men who were presented with information suggesting dating is difficult would then be more persistent when faced with a challenge and would report being more motivated to achieve both academically and professionally. I predicted that women's persistence and motivations would not be affected by whether or not men are choosy in their mating partners because evolution has not selected the same intrasexually-competitive strategies for women as it has men.

### Method

# **Participants**

Seventy-seven male and seventy-eight female undergraduates from Texas Christian University participated in exchange for SONA credit ( $M_{\rm age} = 19.33$  years, SD = 1.36) with 79 in the "dating is difficult" condition (experimental) and 76 in the "dating is easy" condition (control).

### **Materials and Procedure**

Groups of participants were seated at individually partitioned computer stations and first asked to complete a computerized consent document. The primes, survey, and data collection were administered using Qualtrics Web-Based Research Suite (Qualtrics, 2015). Participants were informed that the purpose of the study was to explore the differences in how men and women remember news media information. Qualtrics then randomly assigned participants to view one of two conditions (both men and women were exposed to the same control condition, but the prime conditions were made gender specific but were in all other ways identical). One slide show (the experimental condition) was designed to make the participants believe that dating in today's culture requires significant amounts of effort and getting a date/significant other is very difficult. The control condition was designed to make the participants believe that dating in

today's culture requires little to no effort and attaining a romantic or dating partner is very easy. See below for a more detailed explanation of the priming slideshows.

After viewing the assigned slide show, all participants proceeded to the survey where they were asked questions concerning their views on how hard people have to work for a mate, persistence, and self-control. Participants were also asked questions about their mood at the time of the study, socio-economic status, sexual history, and other demographic information.

Additionally, participants were asked to provide a written summary of the previously viewed slide show between two scales as a measure of retention of the primes and to serve as a priming booster with the goal of recreating the feelings the prime evoked. Each measure is described below in detail.

Priming conditions. Both slideshows were designed to mimic an article from a popular magazine favored by young adults. The men's primes were presented as *Esquire* articles and the women's primes were present as *Cosmopolitan* articles. The "dating is difficult" primes described in detail the qualities one must possess to procure a mate, each of which are considered difficult to attain (i.e. financial status, intelligence, ambition, etc.). These primes were entitled "What Women Really Want: 6 Essentials Every Man Must Have To Get The Girl" (gender pronouns were changed for the female primes). Each "essential" was made to instill the idea that in order to procure a date/dating partner, a person must have exceptional qualities and put in significant amounts of effort. Images were used to reinforce the topic of each slide and were chosen specifically to because of their neutrality (no faces, famous persons, etc.). All images used in the experimental primes can be found in Appendix A.

The "dating is easy" primes described the reasons why dating today is easy (i.e. gender equality, social media, sexualized media, etc.). These primes were entitled "Get Out There,

Tiger: The 4 Reasons Dating Is Easier Now Than Ever Before." Each slide depicted reasons that getting a date/dating partner does not require any remarkable qualities/skills, the exact opposite of the aim of the experimental primes. Again, the slideshow included non-biasing images to reaffirm the theme of the slide. All images used in the control primes can be found in Appendix B.

**Prime Pre-Testing**. Both slideshows were pre-tested with a separate group of participants (N= 74; 39 females) to ensure that the primes had the desired affect on beliefs regarding the need for achievement standards. The conditions were coded as "dating is difficult" and "dating is easy". A one-way analysis of variance was conducted to determine if differences existed between participant beliefs regarding the amount of achievement necessary to obtain a date or romantic partner after concepts of dating is difficult (i.e., one must possess an extraordinary set of traits and financial resources) or dating is easy (it is not necessary for one to have success or financial resources) were made salient. Results revealed a significant difference between the primes, F(1, 72) = 40.77,  $p \le .001$ . Specifically, the beliefs regarding the need for high achievement standards to obtain a dating or romantic partner in the "dating is difficult" prime ( $M_{dating-difficult} = 5.23$ , SD = .17) was significantly higher than in the "dating is easy" prime  $M_{dating-easy} = 3.70$ , SD = .17).

How Hard People Have to Work for Mates. After viewing the slideshow, participants answered questions designed to assess how difficult or not they believe people have to work to attain a date/dating partner. This scale first asked participants to rate how much they agreed with statements asserting that one must be financially successful and be high achieving to attract dating and or sexual partners. An example of this kind of statement is: "It is difficult to find dating partners unless you have a lot of money" (rated on a seven-point scale: 1 = strongly

disagree, 7 = strongly agree). The second part of this measure asked participants to rate how important a person's financial prospects are when one is choosing long-term mate and when one is choosing a short-term sexual partner (rated on a seven-point scale: 1 = not at all important, 7 = extremely important). Finally, each participant was asked to quantify how much (on a scale from 0-100) a set of qualities (ambition/industriousness, salary/income, job prestige/importance, and social status) he or she would have to possess to attract a long-term dating partner and a short-term sex partner.

**Persistence (grit) Scale.** Participants were then given the grit scale, which is designed to measure participants' levels of perseverance and passion for long-term goals (Duckworth, Peterson, Matthews, & Kelly, 2007). In this measure, participants were given a series of statements and asked to rate the truthfulness of each when applied to themselves (rated on a five-point scale: 1 = not at all like me, 5 = very much like me). Examples of such statements are "I can overcome setbacks to conquer important challenges" and "I am likely to finish whatever I begin."

**Self-Control Scale.** Next, I measured the participants' ability to use self-control by presenting statements concerning ability/desire to practice self-control. Examples of the statements given are "I can resist temptation", "It is difficult to stop myself from saying inappropriate things", and "People would say that I have iron self-discipline" (rated on a five-point scale: 1 = not at all true, 5 = very true).

**Brief Mood Introspection Scale.** Participants were then asked to rate their current mood. This scale is comprised of a series of emotions and then a rating of the degree to which these emotions are felt (rated on a four-point scale: 1 = *definitely do not feel*, 4 = *definitely feel*).

**Socio-Economic Status and Demographics.** In addition to the scale measures, I also asked the participants information about their socio-economic status, both during childhood and currently, and additional demographic information.

### Results

I first created a composite variable for each of the two dependent variables – persistence (grit) ( $\alpha = .785$ ) and self-control ( $\alpha = .830$ ) and the manipulation check item – the "how hard people need to work for mates" scale, by averaging participants' responses to each scale. To test my specific predictions, I conducted a 2 (prime condition) X 2 (sex) mixed model ANOVA with persistence (grit) and self-control as the dependent measures. I also included "how hard people have to work for mates" to ensure that the manipulation would produce differences in participants' perceptions about the difficulty of attracting a mate. The Brief Mood Introspection Scale was used to ensure participants' answers were not affected by a negative mood at the time of the study. Consistent with the notion that cues indicating that dating is difficult alter participants' view of attracting a mating partner, the manipulation check showed showed a significant relationship between prime conditions and the "how hard people need to work for mates" scale ( $M_{dating-difficult} = 4.23$ , SD = .76;  $M_{control} = 3.65$ , SD = .68), F(5, 147) = 6.19, p = .00. Further, consistent with my hypothesis, results revealed a significant interaction between prime condition and sex on persistence (grit), F(1, 149) = 3.35, p = .069, and self-control, F(1, 149) =3.59, p = .060.

I next probed these interactions by running a MANOVA separately within each sex. For women, the results revealed no main effect of cues indicating mating is difficult on persistence (grit) (p = .50) or self-control (p = .38). For men, however, the results revealed a significant interaction between prime condition and both dependent measures. As predicted, men primed

with cues indicating that dating is difficult reported higher levels on the first dependent measure, persistence (grit), than did those in the control condition F(1, 73) = 2.87, p = .095 – see *Figure 1*. The same effect was seen with the second dependent measure of self-control F(1, 73) = 3.08, p = .083) – see *Figure 2*. Consistent with the predictions, men in the "dating is difficult" condition reported significantly elevated levels of persistence and self-control.

### Discussion

The results of this study provide insight into the growing achievement gap between the sexes and its potential causes. As predicted, men's reported persistence and self-control levels were significantly impacted by whether or not they believe women are easy or difficult to attract. Men who believe attracting a woman requires high achievement showed a higher self-reported ability to persevere through difficulties (persistence) and discipline themselves in the face of distractions (self-control), two qualities that are necessary to reach a high level of achievement in today's society. These findings are consistent with Trivers' Parental Investment Theory. If women are perceived as choosy, then men will display characteristics that are desirable to a woman significantly more than if women are not perceived at choosy. From an evolutionary perspective, then, it can be said that the decline in male achievement in recent years is in fact due, in part, to a decline in female choosiness when it comes to mate selection. This change in the social dynamic between the genders could have serious implications in the coming years for cultural norms, dating expectations, and even the gender equality movement. With the sexual "playing field" leveled between the genders, men and women will become increasingly more similar rather than different, especially as more women use oral contraceptives. Of course, women will always have to invest more in offspring due to their genetics. However, as the use of contraceptives becomes even more widespread, so will the changes in mindset they bring about.

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This change could lead significantly more gender equality as men and women are more able to approach the dating scene, the education landscape, and the work environment on more equal footing. Or, in a more extreme case, if the achievement gap continues to widen between the genders, historical gender roles could reverse, with women becoming the more dominant gender in the domains of education and professional life. While these potential changes may seem concerning or even outlandish, more research is necessary to support the theory that female choosiness influences male achievement levels before any of these possibilities are seen as potential realities.

This study has some limitations that are necessary to mention. The study population was from a small, private university, therefore potentially limiting its applicability to other populations. Also, this university has a strikingly skewed gender ratio, with approximately 60% of the population consisting of women, and only 40% of men. This fact could uniquely alter the perceptions of this population. However, I find it encouraging these effects were found in an affluent population of males who are enrolled in an undergraduate degree program and on the road to a successful future. I would predict that the effect would be the same or even stronger in future studies on a less affluent, non-college student population. There are many potential future directions for this study. First, correlational data is needed between the advent of oral contraceptives and the decline in male achievement to reaffirm the relationship between the two occurrences. Further, this study needs to be conducted on men who more accurately represent the achievement gap phenomenon, that is, men who are not in college/seeking high paying careers like the men tested in this study. Also, a larger sample size from men across the country is needed to make the data more robust and conclusive. Next, a behavioral measure of achievement, persistence, and/or motivation would also make the data on this theory more

convincing. Finally, a study on women testing whether or not taking oral contraceptives (not being able to conceive) truly makes them less choosy about their sexual partners based on well-known traits preferred by most women (financial resources, high social status, interest in rearing children, etc.). These studies would provide substantially more support for for the findings of the current research. The potential effects of the growing achievement gap between the sexes and its causes could result in serious changes for future generations, and therefore, this area of study deserves further exploration and attention. Until then, it is safe to say that perceptions of female choosiness clearly has an affect on male persistence and motivation.

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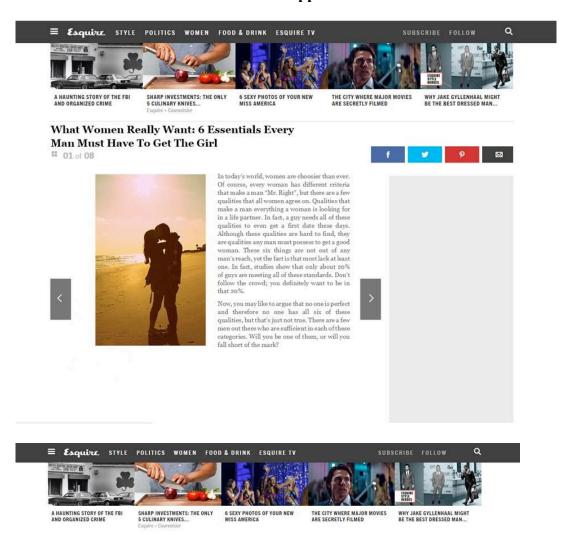


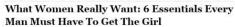
Figure 1: Effect of condition (dating is difficult vs. control) on persistence (GRIT). Higher values indicate higher level of persistence.



Figure 2: Effect of condition (dating is difficult vs. control) on self-control. Higher values indicate higher level of self-control.

# Appendix A





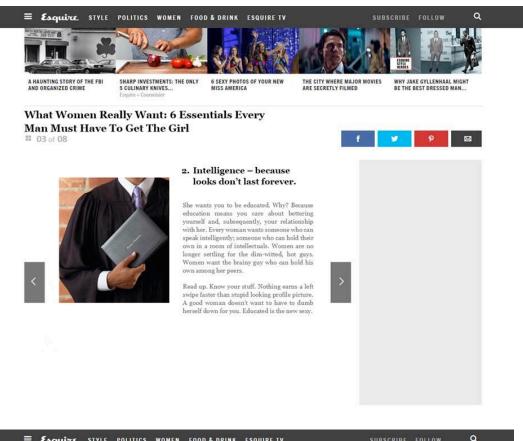
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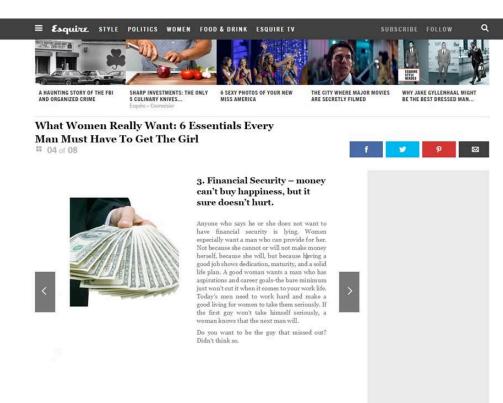


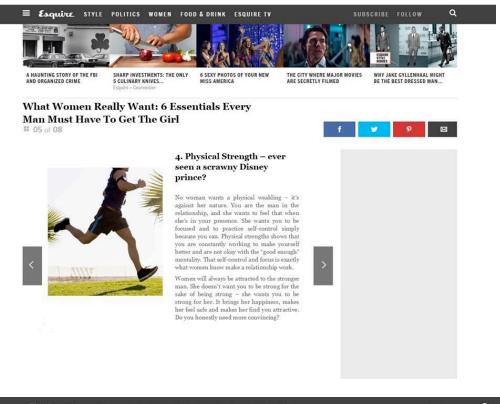
#### 1. Drive – and a lot of it.

Yes- women are more independent these days than ever before. Regardless of that fact, women still want a man who has a lot of drive to achieve his goals. Women don't want the dead-west "cool guy" who spends his days playing video games on his couch, they want the hardworking, "so-getter" guy who can show her that he is serious —both about his life and ber.

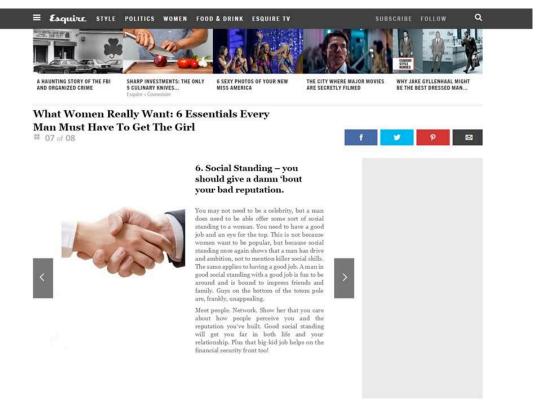
She wants him to want to share in her success with his own. She also doesn't want to feel like she has to lie to you about her success to protect your ego. The modern woman wants a partner who is an equal. Don't wait for her to push you further, because then it's already too late!

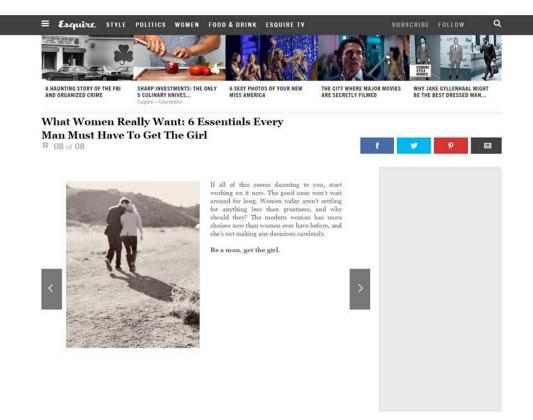


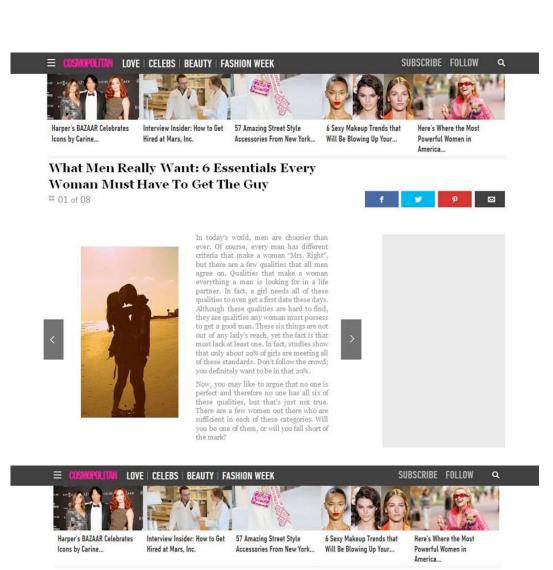












## What Men Really Want: 6 Essentials Every Woman Must Have To Get The Guy

## 02 of 08



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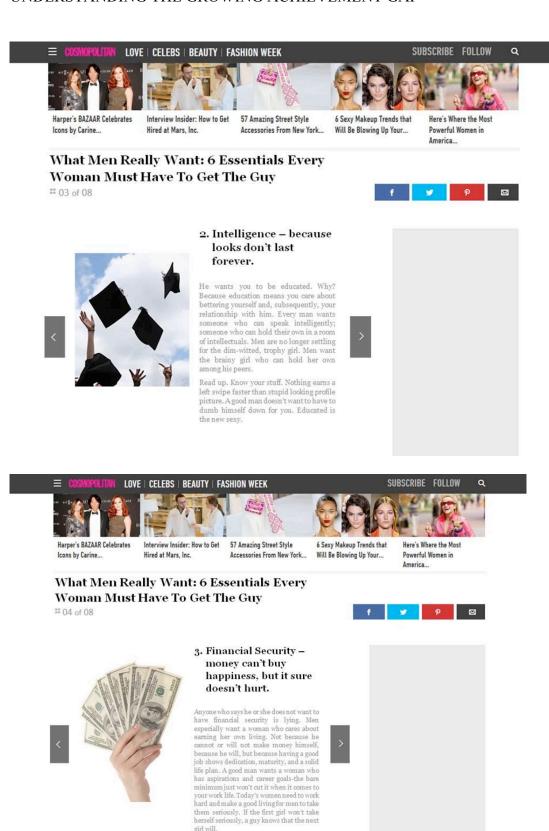
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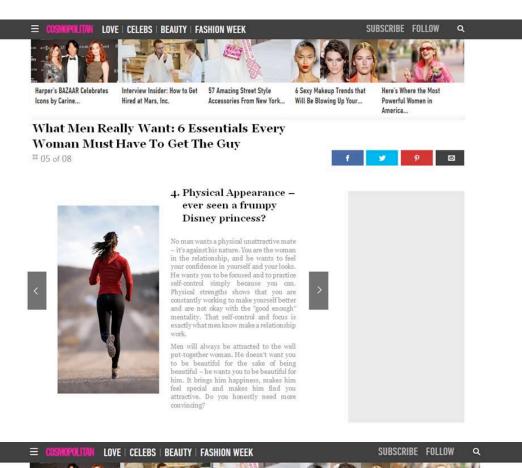
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Do you want to be the girl that missed out? Didn't think so.





### What Men Really Want: 6 Essentials Every Woman Must Have To Get The Guy

## 06 of 08



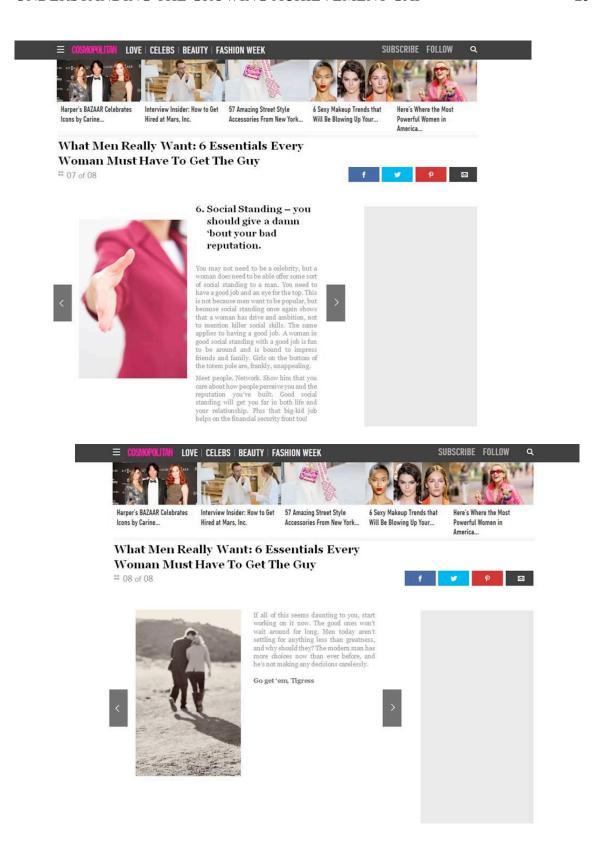
### Manners – because dodo birds aren't fun to take to parties.

This one is pretty simple be polite. Manners show that you are educated, refined, and know how to handle yourselfin any type of situation. In a world where niceties have fallen to the wayside, men are demanding women who know their manners.

This means referring to people as "sir" and "ma'am", saying please and thank you, and knowing how to handle yourself in front of his classy, conservative parents. Don't make him look bad-mind your manners.

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# Appendix B





are the days of courting and waiting around for "true love." Today's men and women have finally said enough is enough and have taken the pressure out of dating. Say goodbye to all those dating headaches and say hello to your next fling! Snagging you dream person has never been easier than it is right now- and here are the 4 simple reasons





# Get Out There, Tiger: The 4 Reasons Dating is **Easier Now Than Ever Before**

# 02 of 06

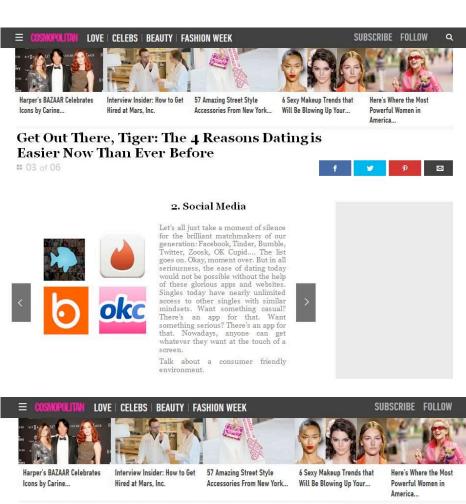


### 1. Gender Equality

In the olden days, women were trapped underneath oppressive societal norms that restricted their sexuality and emphasized the need to wait for the (nonexistent) "perfect guy." Basically, it was all work and no play for everyone back then on the dating front. Thankfully, times changed. Since women have been liberated from ancient norms and rules, they have started playing the same game men have been playing for centuries. Now both sexes are free to enjoy careers, casual sex lives, and exciting social calendars without shame or embarrassment. Today's singles are free to date whoever they want, whenever In the olden days, women were trapped to date whoever they want, whenever they want, however they want- and they are having a blast doing it.







# Get Out There, Tiger: The 4 Reasons Dating is Easier Now Than Ever Before

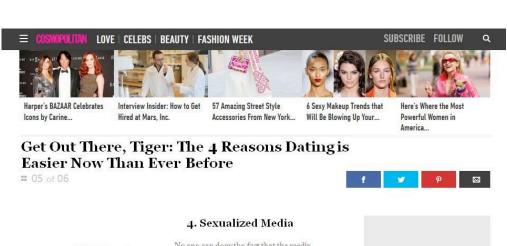
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# 3. Hook Up Culture



The famous "hook up mentality" of college has made its way to the big leagues: real life. Never before have people taken sex and dating as casually as they are now. Singles are happy to simply "hook up" without any strings attached. 50% of people in a survey said they have had more than one casual relationship, with 75% of those that haven't saying they would be interested in having one in the future. Basically, what that means is that people are ready for casual relationships. People are done with the old hardships and pressures of dating.

Carefree is the new sexy these days. Take advantage of it!





No one can deny the fact that the media has gotten increasingly sexy in recent years. The amount of sexual content in TV shows, movies, and music is astonishing, and it's having an effect on the dating scene. People often derive their opinions about what is "normal" or "acceptable" from what they see on screen or hear in music. If celebrities and music artists are being more casual and open about dating, then the common man/woman will follow. Singles today have been inspired by the media and its laisse faire approach to dating and have decided to run with it.



# Get Out There, Tiger: The 4 Reasons Dating is Easier Now Than Ever Before

# 06 of 06



All of the above previous information considered, it's pretty obvious why dating has become so easy in the last couple of years. Finally, society has perfected the dating recipe: lower standards, a hook up mentality, sexualized society, and unlimited access to other singles. That combination has created a new Eden for singles on the dating scene. The opposite sex is no longer something to fear. Whether you like it or not, dating is simple these days.

Get out there, ask around, succeed. That's really all there is to it!



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