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The challenge of starting and keeping a relationship: Prevalence rates and predictors of poor mating performance

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ABSTRACT

There are reasons to believe that the mechanisms involved in mating, evolved in a context where marriages were arranged and male-male competition was strong. Thus, they may not work well in a post-industrial context, where mating is not regulated and where male-male competition is weak. As a consequence of the mismatch between ancestral and modern conditions, several individuals may face difficulties in the domain of mating. This study aimed to estimate the prevalence rates of poor mating performance and to identify some of its predictors. In particular, evidence from 1894 Greek and Greek-Cypriot participants from three independent studies, indicated that about one in five individuals found intimate relationships difficult, about one in two experienced difficulties in either starting or keeping a relationship, and about one in five experienced difficulties in both starting and keeping a relationship. Moreover, it was found that sexual functioning, self-esteem, self-perceived mate value, choosiness, personality, attention to looks, and mating effort were significant predictors of poor mating performance. It was also found that men and women closely overlapped in their mating performance, while age did not predict how well people do in the domain of mating.

1. Introduction

Humans are sexually reproducing species, which means that for individuals to pass their genetic material to future generations, they need to gain access to the reproductive capacity of the opposite sex. Consequently, very strong selection pressures are exercised on people to evolve adaptations that would enable them to gain such access. To put it differently, those who lacked such adaptions would not be able to pass their genetic material to future generations, and so they would not be anybody's ancestors (Buss, 2017b). This argument indicates that most individuals are endowed with mechanisms or adaptations that make them effective in attracting and keeping mates. On this basis, it can be predicted that most men and women would do relatively well in the domain of mating. However, anecdotal evidence, as well as evidence from rates of singlehood and divorce suggests that this prediction is unlikely to hold (Kennedy & Ruggles, 2014; Miller, 2011).

Still, the extent to which people experience poor performance in the domain of mating remains currently unknown. In particular, to our knowledge, despite the strong academic interest in intimate relationships, there has not been any effort to measure how many people experience difficulties in mating, and the factors that predict such difficulties. Accordingly, the first goal of this research is to attempt to estimate the prevalence rates of people who experience such poor performance. Its second goal is to employ an evolutionary theoretical framework in order to derive testable hypotheses about the main factors that predict poor mating performance. We will discuss this framework first.

2. Poor mating performance

Success in the domain of mating involves being able to attract and retain mates (Buss, 2017b); accordingly, we can conceptualize mating performance to depict how well people do in these domains. There are several reasons that can impair the mating performance of an individual. To begin with, individuals may have been endowed by selection forces with adaptations that would enable them to do well in the domain of mating; yet, stochastic factors such as accidents and illnesses may damage these adaptations, causing impaired performance. For instance, a car accident may result in disfigurement, and since good looks are highly valued in the mating market (Buss, 2017b), it can result in poor mating performance. Health problems primarily affect older individuals who have usually solved the problem of reproduction. In addition, serious accidents that have considerable and permanent negative effects on individuals, are expected to be rare. Thus, these factors possibly explain a small proportion of the variance in mating performance.

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As all other adaptations, adaptations which enable an individual to have good mating performance, are coded by genes which are susceptible to mutations. Mutations may impair these traits, and consequently the capacity of an individual to form intimate relationships (Keller & Miller, 2006). Yet, harmful mutations are very rare (Palamara, Francioli, Wilton, et al., 2015), so mutation rate would explain only a small proportion of poor mating performance. Overall, health issues, accidents and mutations may impair mating performance, but they are unlikely to explain why a large proportion of the population faces difficulties in the domain of mating. It has been recently proposed that the primary reason behind these difficulties is the mismatch between ancestral and modern conditions (Apostolou, 2015b); this hypothesis will be examined next.

2.1. The mismatch problem

Adaptations are mechanisms which have evolved to interact with the environment so as to produce fitness-increasing outcomes i.e., to increase the probability that the genes that code for them are represented in future generations (Nettle, 2009). When the environment changes, selection pressures are exercised on these mechanisms to adapt to the new environmental conditions, so as to be able to produce fitness-increasing outcomes. Nevertheless, the process of adapting to novel environments can take several generations, which means that if an environmental change is recent, evolved mechanisms may not have sufficient time to adjust to the new environment. Consequently, several adaptations may not produce a fitness-increasing response when interacting with the environment, because it is novel and they have not adapted to it- the so called mismatch problem (Crawford, 1998; Maner & Kenrick, 2010).

Adaptations are domain-specific in the sense that they have evolved to deal with a specific part of the environment (Barkow, Cosmides, & Tooby, 1992). Thus, the mismatch problem would affect an adaptation predominantly if its domain has been affected by the environmental change; otherwise, the environmental change is expected to have little effect on it (Irons, 1998). It has been argued that the recent transition to post-industrialism has resulted in considerable changes in the mating domain, which in turn, have affected adaptions which are involved in mating (Apostolou, 2015a).

In more detail, the genus *Homo* evolved on earth about two million years ago, and for most of this period our ancestors lived in a pre-industrial context, where they based their subsistence on hunting and gathering and on agropastoralism (Bellwood, 2004; Lee & Devore, 1968). Anthropological and historical evidence indicates that in ancestral human societies mate choice was regulated, with parents choosing spouses for their children, rather than children choosing spouses for themselves (Apostolou, 2007, 2010, 2012; Broude & Green, 1983). In addition, there are good reasons to believe that male-male competition, where men monopolize access to women by fighting other men, was also strong in ancestral human societies (Puts, 2010, 2016). Thus, in an ancestral context, people would predominantly find partners through arranged marriage or through monopolizing them by force, so the mechanisms involved in mating would have adapted to these conditions.

The Industrial Revolution, which began in the 18th century Britain (Baten, 2016), has resulted in most human societies transiting to post-industrialism. In post-industrial societies, individuals do not form coalitions to fight others in order to get their mates, and marriages are not arranged, but people find mates on their own. In particular, in contemporary societies men form coalitions with other men, in order to support them in their mating effort. For instance, a man could use the assistance of other men in spreading positive information about him in prospective mates (Pham, Barbaro, & Shackelford, 2015). Yet, such coalitions work very differently from the male coalitions in pre-modern times, which involved predominantly physical force in order to fight other men and get their mates. Also, although parents in post-industrial societies exercise considerable influence over their children' mate choices through manipulation (Apostolou, 2013), children are generally free to choose their own mates.

Overall, the industrial revolution has resulted in major changes in the domain of mating. As the transition to post-industrialism was very recent for major evolutionary change to occur, the mismatch problem is likely to have affected several mechanisms involved in mating, resulting in people experiencing poor performance in this domain (Apostolou, 2015a). The mechanisms which are more likely to have been affected will be discussed next.

2.2. Predictors of poor mating performance

To begin with, mechanisms that regulate sexual functioning are likely to have been affected by the mismatch problem (Apostolou, 2015b, 2016b). To use one example, during a raid or war, it would be more optimal for men to ejaculate soon after the initiation of intercourse so as to avoid opening themselves to attacks. Accordingly, in an ancestral pre-industrial context, alleles that predisposed for quick ejaculation would experience positive selection and would be in a relative high frequency in the population. Yet, ejaculating soon after the initiation of intercourse is not optimal for a free mate-choice context, as it prevents men from providing adequate sexual satisfaction to their partners (Apostolou, 2015b). As a consequence, ejaculation soon after penetration is given the label "premature ejaculation" and it is considered a dysfunction one out of five men suffers from (Lewis et al., 2004; Shifren, Monz, Russo, Segreti, & Johannes, 2008).

Yet, most of the cases of premature ejaculation do not reflect genuine dysfunctions in the sense of a mechanism not working properly, but instead, a mechanism working as it should for the environment in which it has evolved to function in. The mismatch between ancestral and modern conditions turns such range of functioning problematic for modern conditions. On the basis of this reasoning, it has been argued that several mechanisms involved in sexual functioning may have been affected by the mismatch problem, resulting in poor mating performance (Apostolou, 2015b). In this example, men who ejaculate soon after the initiation of intercourse would face difficulties in providing sexual satisfaction to their partners, and would experience as a consequence, poor mating performance.

Personality predicts many aspects of human interaction, including intimate relationships (Buss & Hawley, 2011; Jonason, Garcia, Webster, Li, & Fisher, 2015). As personality traits have been shaped by selection forces operating in ancestral environments, it can be the case that several personality dispositions impair the formation of intimate relationships in contemporary environments. To use one example, traits such as introversion, can be disadvantageous where individuals have to find mates on their own, but would have had few or no negative mating-related fitness consequences in an ancestral context, where marriage was the result of negotiations between families. In this respect, certain personality dispositions, that had no or that had little effect in the ancestral context, may lead to individuals being susceptible to poor mating performance in the modern context (Apostolou, 2016a).

Related to personality, another mechanism which may not have been optimized for a free-mate choice context is self-esteem (Swann, 1996). More specifically, in a free-mate choice context, low self-esteem may prevent people from actually pursuing mates, as they may feel unlikely to succeed, or they may choose mates of low mate value, as they may feel that they are the only ones they can attract. Still, a relatively high self-esteem is not required in an arranged-marriage context where individuals do not need to actively pursue partners who are supplied by their parents. Accordingly, self-esteem may not have been optimized for modern conditions, with many individuals experiencing low self-esteem which can impair their mating performance.

When exercising mate choice, individuals screen prospective mates for fitness-increasing traits. For instance, individuals are endowed with mate preferences that enable them to prefer mates with fitness-