INTRODUCTION

Over the past 50 years, women have achieved significant employment gains by breaking gender barriers in career selection. Today, more young women choose careers in traditionally male-dominated fields such as engineering and technology, and the number of women running for political office is rising in countries worldwide. However, despite these gains, gender inequality in the workplace continues to be a critical issue. Even with efforts to eradicate these disparities, gender inequality in wages and promotion and gender-based discrimination still affect the female workforce. Globally, women are educated and actively participate in the workplace, but gender inequality between men and women is still obvious in many occupations. For example, women face gender inequality in Canadian organizations, which affects their hiring, training, pay, and promotion. In health-care education, such as medicine, women also have fewer workforce opportunities than men in Canada, the US, and the UK. Women in the Saudi labor force have increasing educational attainment and strengthening attachment to the workforce but are afforded fewer opportunities than men, which leads to women applying for very narrow domains of work such as education and administration.

In the Kingdom of Saudi Arabia, many factors negatively affect the participation of women in the workforce, such as parental issues, employer bias, discrimination, stereotyping, limited training, and policies. Some challenges that Saudi women face include balancing work and family hours, conservative culture and religious conditions, and limited career advancement,
which includes female paramedics in the Saudi Emergency Medical Services (EMS) setting.[7] The need for gender balance among Saudi paramedics is important to ensure the delivery of appropriate emergency care for all patients. Training of female paramedics recently began in many private colleges and public universities.[8] Between 2010 and 2018, these colleges and universities have graduated >1500 female paramedics.[9] A small number of female graduates are working in public or private hospitals such as King Khalid University Hospital, King Fahad Medical City, and King Abdullah University Hospital.[10,11] Some hospitals have policies to hire these graduates as paramedics, while others employ them as nurses. In Saudi Arabia, the main prehospital provider is the Saudi Red Crescent Authority (SRCA), which is responsible for providing basic and advanced life support.[12] The service is run by Saudi and non-Saudi male paramedics and emergency medical technicians (EMTs).[13,14] While both genders are qualified to work as paramedics, it is considered in Saudi Arabia that male paramedics and EMTs are more capable for these types of jobs.[15-17]

In the USA, gender bias and discrimination are significant challenges in the workplace, with women experiencing gender-based harassment.[18] Male dominance in the workplace, especially in influential and powerful positions, may give them the power to harass females and other workers.[19,20] The “glass ceiling” concept addresses hidden barriers that are gender biased, such as men being in high-level decision-making positions.[21] There are many gender-related organizational factors contributing to glass ceiling barriers.[22] Therefore, there is a need to examine the link between gendered organizational factors and the glass ceiling within a developing country such as Saudi Arabia.[23] Gendered organizations theory (GOT) incorporates the gender-based challenges experienced by women in modern organizations to sensitize and recommend best approaches to addressing issues related to gender inequality, including prehospital health-care services.[24]

**CONTEXT OF THE KINGDOM OF SAUDI ARABIA**

The Kingdom of Saudi Arabia is located in the Middle East and the furthest part of south-western Asia. It is one of the largest countries in the region, occupying 2,188,000 square kilometers,[25] and has a population of 33,413,660 people, where females make up 42.4% (General Authority for Statistics).[26] According to the United Nations, projections forecast the Saudi population will reach 40 million by 2025.[27] Saudi Arabia was unified in 1932 by King Abdulaziz Bin Abdulrahman Al-Saud[27] and is considered the heart of the Islamic world since it holds the two holy mosques of Islam, Mecca, and Madina. Islam is the official religion in the country, and Al-Sharia, which has been derived from the Qur’an and Sunnah (the narratives of the prophet Mohammad), is the official law, causing a direct impact on the social structure of Saudi families. The fundamental obligation of each Muslim is to totally submit to God (Allah) and give obedience to his law, as stated in the Qur’an and Sunnah.[28] Saudi Arabia’s cultural background is heavily affected by Arabic and Islamic culture.[29] In general, society is profoundly religious, conservative, traditional, and family oriented.[30] Many attitudes and traditions that derive from Arab civilization and Islamic culture are centuries old. However, the country’s culture has also been affected by rapid change, as in the 1970s, when it became a wealthy commodity producer in just a few years after being an impoverished mostly in the nomadic community.[27]

**The health system in Saudi Arabia**

The Ministry of Health (MOH) was created in 1950 and has the main responsibility for the health-care system in Saudi Arabia.[31] The MOH oversees the finances, operations, and supervision of all health-care sectors in the country.[32] The country is divided into 13 regions under the MOH with a representative for each geographic area.[31] There are many system challenges, including a shortage of professionals, lack of resources, and a shortage of male and female paramedics.[30] The MOH, along with all other governmental hospitals, is responsible for providing 24-h emergency care services, which cannot be achieved without relying on the SRCA. The EMS is provided by the SRCA who was established since 1934 and provides prehospital services via 454 stations distributed across the 13 administrative regions, which are serviced by 5,715 male EMTs and paramedics[14,26] where the Saudi female paramedics can only be employed within hospitals.

**Role of Saudi women**

While Saudi women have many roles and positions in the country, these often do not include leadership positions in health-care organizations, hospitals, or health-care education. They work as doctors, dentists, nurses, pharmacists, and allied health personnel.[36,31] According to the General Authority for Statistics,[26] Saudi women comprise 18.6% of the general workforce in health-care sectors and 36.9% of the total number of female health-care providers (which includes other nationalities). One of the significant objectives of the Saudi Arabia’s Vision 2030 is to ensure >50% of graduates is being women in Saudi universities, to develop more opportunities for their talent, and to enable them to strengthen their future and contribute to the development of Saudi society and the economy.[30,33] Vision 2030 aims to increase Saudi women’s empowerment and employment and to give them opportunities to contribute to the development and rebirth of the country.[31] Vision 2030 reports that female workers occupy 22% of all jobs in the country and plan to increase female empowerment and employment to 30% by 2030,[31,33] which considered a significant part of this inclusion will be in the health-care sector. This paper aims to identify an appropriate theoretical model that addresses gender inequality that would be applicable for exploring the situation for all employed women, including Saudi female paramedics.
The glass ceiling
The “glass ceiling” is a concept first coined by The Wall Street Journal in 1986 to describe invisible barriers for women and minorities in the workplace.[34,35] Western feminism sought to oppose this discriminatory glass ceiling in the 1970s.[36] All challenges of biases against women and minorities, such as age, sex, cultural differences, and organizational politics, are faced to ensure equal growth opportunities in the workplace. There is a large amount of research on the glass ceiling, addressing its effects on women in the workplace. Women have already proven their ability to work at top levels, but the barriers underpinning the glass ceiling still block many from reaching top management levels.[37] Going beyond the workplace, Pingleton, Jones, Rosolowski, and Pingleton et al.[38] argue that these invisible barriers also deprive society of potential leaders who could benefit society as a whole. Men, on the other hand, have more opportunities to become leaders in the workplace and society. It has been debated that some men also consider women to not be sufficiently motivated to work as hard as their male colleagues, and also to have lifestyles that can negatively affect their work,[39] such as having more family responsibilities, birth planning and child-rearing.

Another American author considered that one further factor contributing to the glass ceiling was women’s level of education,[39] which was found to have less impact compared with the factors outlined by Powell. A study by Connell[36] exemplified three key factors in her published findings of 10 public sector organizations in an Australian context [Figure 1]. First, women experienced discrimination, stereotypes, and prejudices in organizations. Second, because of irrational discrimination in some organizations, there was a loss of capacity to use women’s talent and conflicts with rational administration. Finally, overcoming the glass ceiling required both genders to remove the prejudice and enforce equal opportunities. The primary finding of Connell’s study was that the gendered division of labor remained a strong presence in organizational life, even in long-standing industries. Some women who have gone through to become leaders in their fields believe that invisible barriers, which they have endured throughout their careers, are so invisible that people reject their existence.[40]

Stereotypes set by society have divided the roles of men and women. Women are considered to be the primary caregivers of their households and find it challenging to balance work life with family life and have to deal with this discrimination in the workplace, as driven by a male-dominated society.[41] Women need to work substantially harder relative to men to prove their eligibility to become leaders.[42] According to Dahlerup,[43] a “ceiling” makes it impossible for women in Arabic countries to break the barriers to corporate levels. The phenomenon of the glass ceiling is usually considered to be a challenge for reaching the top level of leadership positions. However, this challenge needs to be addressed beyond the notion of “glass ceiling” to the notion of “gendered organizations.” GOT does not differentiate between top- or low-level jobs and positions. It takes a holistic view to studying practices and processes and exploring challenges faced by women in work environments across all levels of employment.

Gendered organizations theory
The GOT was developed by Joan Acker after observing the failure of existing gender-based theories to adequately analyze and provide an insightful explanation of the impact of gender in organizations.[44] The GOT posits that organizations and workplace interactions contain normative gendered expectations that privilege men and oppress women. According to Acker,[44] integrating gender as an analytic category in understanding organizational culture and process is critical. GOT is a systematic framework that focuses on the various gender-based factors and practices that create inequality between men and women.[45] Indeed, adopting a gendered perspective in organizational analysis illuminates the bias, segregation, oppression, discrimination, and inequality created by patriarchy and male dominance in the workplace.[46]

The concept of GOT perceives the organization as an extension of society with inherent elements of the political sphere that demonstrate patriarchal systems.[47] Therefore, understanding this theory calls for scrutiny of the organization as a power-holding tool that promotes patriarchy by perpetrating male privilege. The organization is an important avenue to understanding gendered inequality by analyzing and understanding its practices and processes.[24,48] A look at the career market illustrates that women tend to cluster in a secondary labor market characterized by lower wages, uncertainty, short career ladder, and few benefits, while men thrive in primary labor markets characterized by greater economic rewards and high career prospects.[23] GOT examines occupational and job segregation, as well
as gender-based differences related to income, power, authority, status, and autonomy. Adopting a gendered analytical perspective is critical in understanding the role of the organization in propagating gender inequalities and formulating policies that can help address the problem.\[23\]

Initially, Acker identified the theory in five factors: Construction of divisions along gender lines; construction of symbols and images; gendered interactions between individuals in the organization; internal gender constructions; and gendered organizational logic.\[49\] In 2012, she re-examined those factors and developed the theory that led to the introduction of four factors of gendered organizations [Figure 2].

These are the new factors that develop gendered processes\[24\] and which lead to gender equality in most organizations

**Organizing processes**
This gendered structure is constructed in organizational processes to address inequalities in distribution, wage determination, job design, behavior at work, and gendered practices of organizations.\[24\] Job classification was created to assist in gender segregation and grouping of wage categories. Women’s jobs were described in general terms, while those of men were more specific. The entry of gender into the system made it more direct in terms of job value.\[24\]

**Organizational culture**
Organizational culture is constructed on the organization substructure to include beliefs on gender differences as well as inequalities. Organizational cultures often include ideas, attitudes, images, and values. Employees from different organizations believe in the existence of equality when it comes to measuring wages and segregation.\[50\] For example, in Saudi Arabia, all employees of the same level, male and female, are paid equally,\[53\] but the difference is that fewer women are employed in health institutions than men, including in the paramedic’s field. Culture in organizations supports continuity of inequalities that pretend to deny the existence of gender inequality in the society through the race, gender, and class relations.\[49\]

**Interactions on the job**
The gendered substructure is also produced and reproduced at different levels of power in and between peer interactions in the workplace.\[24\] Interactions in organizations may either belittle or exclude women, especially when it comes to groups dominated by men.\[23\] To some extent, working relationships may be complicated with issues of sexuality, creating gender differences.\[47\] Some of the primary sexism formed in working environments is a critique of the ability of women to perform tasks better compared with men.\[24\]

**Gendered identities**
Gendered identities for women and men can be formed and changed based on how they participate in the workplace. For example, women who aggressively manage their jobs can be seen as too strict, while those who behave in a more feminine and cooperative manner can be seen as weak and ineffective.\[24\] Women make supportive managers and represent effective managers who can identify variables and multiple changes over time and place.\[23,24\] Nursing managers are identified by their supportive role function and behavior.\[49\] These factors are essential in addressing gendered organizations. The increasing numbers of women in the workplace is an advantage as they can collectively better challenge for their rights and higher-level positions in organizations.

**The link between the glass ceiling and gendered organizations theory**
Gender inequality in an organization has an impact on opportunities for promotion.\[52\] In Saudi Arabia, for example, male dominance is evident in the health-care setting where men hold the most powerful and well-paying positions, while women serve in subordinate positions such as laboratory technician, radiology technician, secretary, and administrative assistant.\[52\] The impact of the glass ceiling is evident in Middle Eastern health-care organizations where the number of women in administrative or managerial positions is limited.\[53\] As illustrated by Wiggins,\[54\] the glass ceiling is a significant factor that limits the number of women in health-care management despite the high number of women working in the field. Horton\[55\] states that the glass ceiling is a major challenge that stops women from reaching senior positions. The effects of gendered organizations are discriminatory promotions and recruitment of individuals to high positions. The dominance of men in senior roles perpetuates the recruit of men into senior roles as a symbol of dominance and authority, as well as upholding the patriarchal
culture that propagates a male network.[24,44] Based on the argument of GOT presented by Acker, the glass ceiling in healthcare is a product of continued male dominance and limiting of women’s access to leadership positions. This link is presented as a conceptual framework in Figure 3.

Significance of the study
To the best of our knowledge, this is the first paper to address GOT concepts within the context of paramedicine in the Kingdom of Saudi Arabia. This paper explores the conceptual framework of the glass ceiling and GOT in the context of Saudi female paramedics to explore challenges they may face in the workplace. The glass ceiling is considered to be a very important topic in the area of healthcare, particularly in paramedicine. For example, qualified female paramedics in Saudi Arabia face difficulties getting jobs in prehospital settings, which may be due to glass ceiling-related hidden barriers. Furthermore, there are visible barriers in policies, procedures, culture and cultural inequalities, such as maternity leave and daycare facilities, pushing women out of the labor force once they have children. As a result, it is prudent to incorporate the glass ceiling with GOT to enable in-depth understanding of the current situation.

This paper is particularly relevant at this time because of the rapid change that is occurring in Saudi Arabia to achieve the aims set out in Vision 2030. The potential positive consequences of change include increasing female recruitment, education, and importantly, retention of Saudi female paramedics. This paper provides a conceptual framework that links GOT and the notion of the glass ceiling in the Saudi context and explores challenges faced by Saudi female paramedics.

The paper contributes additional explanations for organizational phenomena and a framework to develop policies to facilitate greater opportunities for women in the Saudi workforce. The insights produced could be utilized to improve and create new jobs in the EMS field, suggest future areas for EMS research and facilitate a leadership pathway for female paramedics.

CONCLUSION
The Kingdom of Saudi Arabia’s Vision 2030 aims to create increased empowerment and employment for women. To achieve this, an understanding needs to be developed on how to address the matters of concern. The theoretical model addressing gender inequality presented in this paper links the glass ceiling concepts and GOT and applies this to Saudi female paramedics. To explore the challenges faced in the workplace by Saudi female paramedics and keeping Vision 2030 in mind, it is important to validate all factors that are presented in the theoretical model to understand the roots of the concept and how it can help to significantly decrease the gap in employment of female paramedics in field of work.

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There are no conflicts of interest.

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