



Social Determinants of Methadone in Pregnancy: Violence, Social Capital, and Mental Health

Karen Alexander

To cite this article: Karen Alexander (2013) Social Determinants of Methadone in Pregnancy: Violence, Social Capital, and Mental Health, *Issues in Mental Health Nursing*, 34:10, 747-751, DOI: [10.3109/01612840.2013.813996](https://doi.org/10.3109/01612840.2013.813996)

To link to this article: <http://dx.doi.org/10.3109/01612840.2013.813996>



Published online: 25 Sep 2013.



Submit your article to this journal [↗](#)



Article views: 543



View related articles [↗](#)



Citing articles: 1 View citing articles [↗](#)

Social Determinants of Methadone in Pregnancy: Violence, Social Capital, and Mental Health

Karen Alexander, MSN, RN

Thomas Jefferson University, School of Nursing, Philadelphia, Pennsylvania, USA

Mothing and methadone can occur together with the right resources and support. Methadone mothers need to be seen in the context of their social risks and environment. Societal attitudes, social capital, and other contextual variables can be changed through policy. The purpose of this article is to describe the contextual risks experienced by drug abusing mothers in order to direct further research and policy changes that protect their children. Research has focused on biological or genetic determinants, but now social risks and environmental factors are shaping current literature about substance abuse in pregnancy. Significant risk factors, taken from the literature, are detailed, such as intimate partner violence and mental health co-morbidities. Racial differences and the effect of place on pregnant substance abusers are also discussed. Policy recommendations address the barriers substance abusing women face in their journey toward a healthy pregnancy.

Mothing and methadone can occur together with the right resources and support. Mothers experiencing drug addiction need to be seen in the context of their social determinants and environment. The purpose of this article is to describe those determinants and disadvantages in order to further direct research that supports methadone mothers and their children. Research in the past has focused on biological or genetic determinants, but social risks and environment are now shaping current literature concerning substance abuse in pregnancy (Wallace, 1999). A literature search of the Cumulative Index to Nursing and Allied Health Literature, PubMed, and Ovid uncovered key studies that emphasize social determinants that influence drug-using behavior in pregnant women.

According to the National Survey on Drug Use and Health (NSDUH), in 2010, 4.4% of pregnant women were using illicit drugs as compared to 10.9% of non-pregnant women of reproductive age. Among opiates, heroin and methadone rank as the most commonly abused drug. Methadone is a long acting opiate, similar in structure to heroin, which has a half life of 24 hours (Burns, Mattick, Lim, & Wallace, 2006). This provides the recovering addict the ability to begin to maintain normal re-

lationships and employment, since the day does not need to be spent seeking a “high.” Methadone has been used since the 1960s to treat, but not cure, the heroin problem in the United States. The pregnant mother, as a part of a methadone treatment program, can begin to improve her overall health and the health of her baby (Burns et al., 2006). Pregnant women on methadone receive earlier prenatal care, family planning counseling, and group support compared with other pregnant women using drugs (Hill, 2013). It continues to be the safest and most effective treatment for opiate addiction.

BACKGROUND

Methadone addiction affects an increasingly large percentage of live births in the United States. Methadone maintenance treatment (MMT) is considered appropriate for women who report opiate dependence for more than one year and show signs of current drug withdrawal (Wilbourne, Wallerstedt, Dorato, & Curet, 2001). Methadone is an opiate similar in structure to heroin; yet, its effect lasts up to 24 hours, making it easier for the addicts to achieve “normal” social behavior (as opposed to daily drug-seeking behavior) (Burns et al., 2006). One of the adverse effects of methadone treatment during pregnancy is the neonatal withdrawal that occurs after delivery. Neonatal abstinence syndrome (NAS) occurs when infants show significant signs of withdrawal (e.g., trembling, high pitched cry, vomiting) and require an extended hospital stay to be weaned off opiates (Burns et al., 2006). Some form of withdrawal is noted in 50% of infants born to methadone treated mothers (Tetsall, Liu, An, Canalese, & Nanan, 2009). NAS is considered a lesser consequence to the potentially fatal withdrawal experience when coming down from heroin or other opiates (Tetsall et al., 2009).

While not an absolute cure, methadone has proven beneficial in reducing morbidity and mortality in drug addicts and compels many professionals to prescribe it (Burns et al., 2006). Methadone alleviates withdrawal symptoms without the unwanted sedation and frees the addicts to seek employment and finish school. Most significantly, the routine of receiving daily (or weekly) methadone dosing allows the patient close and frequent contact with a health care provider. This has proven

Address correspondence to Karen Alexander, Thomas Jefferson University, School of Nursing, 130 S. 9th St., Philadelphia, PA 19107. E-mail: Karen.Alexander@jefferson.edu

effective for providing early prenatal care, which decreases infant mortality and morbidity (Burns et al., 2006). Methadone can be used to change addictive behavior patterns, but the underlying cause of the addiction has not been fully studied or understood. We have been starting in the wrong place.

Starting with a desire to find a cure before determining why people use heroin will always fail to produce a solution. Many health disciplines remain focused on fixing the behavior, instead of understanding and preventing the behavior's root cause. In the conceptual framework presented by Galea et al. (2003), upstream variables are identified as social norms, neighborhood disadvantage, social capital, health and social resources, and the physical environment. Mediating factors include social support and social networks, as they may intervene between the contextual level determinants and the individual's risk factors. The studies referenced in this article begin to reveal the contextual risk factors related to drug use in pregnant women starting from the individual level, then the social level, and lastly, the physical environment. The key examples described at each level are mental health co-morbidities, violence, racial disparities, and the importance of place.

MENTAL HEALTH

According to Eggleston et al., 2009, a large percentage of substance abusing women also have a co-existing mental health disorder, as diagnosed by the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition. "Among women with substance abuse disorders, 28% to 44% meet criteria for an affective disorder, 10% to 20% for anxiety disorders other than post traumatic stress disorder, and 2% to 41% for eating disorders" (Eggleston et al., 2009, p. 415). In addition, these co-morbidities prevent women from holding jobs and accessing care. Psychiatric illness in addition to substance abuse disorders can increase the incidence of relapse and treatment dropout rates (Eggleston et al., 2009). Furthermore, low income or minority women with both mental illness and substance issues access care at even lower rates (Rosen, Tolman, & Warner, 2004).

Eggleston et al. (2009) recruited participants to study the relationship between posttraumatic stress disorder (PTSD) and substance abuse at the Center for Addiction and Pregnancy at Johns Hopkins Medical Center. A 24-hour urine drug screen was obtained from each pregnant woman, and a complete psychological assessment was conducted through observation and interviews. The participants were primarily African American, single, and unemployed. Over three-quarters (78%) of the participants selected methadone maintenance as a treatment (Eggleston et al., 2009). The group with concomitant PTSD and substance abuse reported "lifetime physical (66%) and sexual abuse (61%) more than the substance abuse disorder (SUD) only group (32% and 16%)" (Eggleston et al., 2009, p. 417). The PTSD and SUD group also reported more suicidal thoughts than the SUD only group (Eggleston et al., 2009). With lifetime physical abuse rates

so high, research is needed to delve into the causal relationship between domestic abuse and PTSD and how to prevent both.

INTIMATE PARTNER VIOLENCE

Violence and substance abuse are intimately connected. Intimate partner violence may, at any time, cause physical injury, mental health problems, and stress induced illness (Martin, Beaumont, & Kupper, 2003). During and after pregnancy, domestic violence can lead to pre-term labor, low birth weight, and parenting impairment (Martin et al., 2003). Furthermore, intimate partner violence is not limited to physical assault; violence includes sexual coercion and psychological attacks.

Those who experience violence often turn to substance abuse patterns in order to medicate the pain while suffering through the abuse. Martin et al. (2003) studied 85 pregnant low-income women in North Carolina to further investigate the relationship between violence and substance abuse. The participants were asked a series of questions probing the timing of violence and the frequency of drug or alcohol use, trying to find a pattern or linkage. The interviews occurred when the women were six–seven months pregnant. Over half (55%) of the women were African American, and 45% were non-Hispanic White (Martin et al., 2003). Among those women who used illicit drugs before their pregnancy, those who experienced violence used slightly more often during their pregnancy compared to the women who did not experience violence. Martin et al. (2003) found that "after the women became pregnant, the links between women's experiences of intimate partner violence and their use of substances became stronger, with the women who experienced each type of partner violence being more likely to use both alcohol and illicit drugs" (p. 613). Therefore, health practitioners screening these women must assess for both substance abuse and violence in the home.

RACIAL DISPARITIES

Heroin addiction in particular is a predominantly white problem. In data reported by the Department of Health and Human Services in 2007, 53% of admissions to treatment for heroin nationwide were Caucasian. Yet, substance abuse by minorities has more deleterious effects physically when compared to Whites and exhibits unique patterns (Wallace, 1999). Perreira and Cortes (2006) focused on the racial characteristics of pregnant substance abusing women. The Fragile Families and Child Wellbeing Study is a random sample of live hospital births in 20 US cities (Perriera & Cortes, 2006). To focus on vulnerable populations, the study purposefully oversampled unwed mothers. Participants ($n = 4,185$) were asked questions related to frequency and quantity of substance abuse during pregnancy (Perriera & Cortes, 2006). After self-reporting their race, participants were put into three categories: Black, White (non-Hispanic), and Hispanic. Acknowledgement of substance abuse was most accurate if the mothers were asked only whether their substance abuse was frequent, infrequent, or never. Socioeconomic status

was determined by answering questions of education completion, welfare status, and home ownership. Family or community support was determined through questions of marital status, attendance at religious institutions, paternal support, financial support from family, residence of greater than one year in current home, and whether the mother worked during pregnancy. Fathers were asked the same questions regarding substance abuse during pregnancy and mothers were asked about any physical abuse (Perreira & Cortes, 2006). Maternal stress and health history were determined by whether the mother had considered an abortion (or father had asked for an abortion), parity, and previous treatment for a substance abuse issue.

The study revealed that 23% of women used some substance (alcohol, tobacco, illicit drugs) during pregnancy (Perreira & Cortes, 2006). Controlling for income and education, black mothers were 71% less likely than Whites to smoke while pregnant and 41% less likely to drink alcohol (Perreira & Cortes, 2006). Likewise, Hispanic mothers were 76% less likely to use tobacco during pregnancy and 58% less likely to drink alcohol than white women (Perreira & Cortes, 2006). Prenatal drug abuse among Hispanics was not explained by socioeconomic factors. However, educated, wealthy white women are at highest risk to drink alcohol. Black and white women with lower socioeconomic status are at the greatest risk to smoke during pregnancy. For black and white women, paternal factors and "intendedness" of pregnancy directed affected substance abuse during pregnancy. For Hispanic mothers, the absence of domestic violence was associated with lower substance abuse during pregnancy (Perreira & Cortes, 2006). Culturally competent programs that include sexual partners and mental health and domestic violence screenings and are easily accessible should be funded to make an impact on substance use frequency.

According to Rosen, Tolman, and Warner (2004), "African Americans were found to be less likely than whites to receive mental health services even after controlling for income and education" (p. 207). In addition to racial barriers, those with low income may find it difficult to access services because of lack of transportation or child care. Substance abuse, in the context of race and income, along with concomitant factors such as mental disorders, places opiate dependent women at great risk.

In general, women of all ethnicities are not eager to enter treatment because of the social shame that substance abuse elicits. Greenfield and Grella (2009) suggest, "The stigma attached to substance use among women, which melds negative images of women's sexuality and their fitness as mothers, accompanied by social and familial ostracism, is often cited as a reason that women do not seek treatment" (p. 881).

IMPORTANCE OF PLACE

In a retrospective study of Australian medical records, Tetsall et al. (2009) aimed to identify characteristics of Aboriginal Australians addicted to opiates in both rural and urban settings. Aboriginal opiate use in pregnancy is four times as high as compared to European Australian mothers. In a sample of Indige-

nous and European Australians, 309 infants and their mothers were reviewed. In the rural setting, 70.1% of the infants were born to Aboriginal mothers as compared to 21.6% in the city (Tetsall et al., 2009).

Three centers, one in rural New South Wales and two in Sydney, were used to study the effect of ethnicity and place on infant opiate withdrawal. All three centers have pediatric teams and use the same protocols in treating addicted mothers and their infants. Aboriginal mothers in the rural setting, as compared to their urban counterparts, required less visits to their obstetrician, had decreased prevalence of hepatitis C, and their infants had a shorter length of hospital stay. The same results were found in the non-Indigenous cohort. Therefore, rurality is significant despite ethnicity for these opiate addicted mothers. Of note, alcohol use in urban dwelling Aboriginals exceeds that of non-Aboriginal mothers, 12% to 3.9% (Tetsall et al., 2009). Documented involvement with the Department of Community Services also was decreased in the rural setting, independent of ethnicity. The rural hospital reported a more individualized approach to the NAS criteria, and focused on more environmental methods of dealing with infant withdrawal (decrease noise, swaddling, holding).

The study did not address whether there were differences in readmissions to the hospital or morbidity as a result of the decreased length of hospital stay. In addition, less involvement with the Department of Community Services may reflect a lack of social workers in the rural setting. More research needs to address the long-term outlook for mothers and their infants, and whether the family stays intact. Although this study took place in Australia, it can be corroborated with evidence from the United States and other English speaking parts of the world (Pickett & Pearl, 2001). A multilevel analysis of social environment and health outcomes in English speaking countries portrayed the effect of context (place) on at least one health outcome after controlling for individual level risk factors like socioeconomic status (Pickett & Pearl, 2001).

However, as described by Rosen et al. (2004), rurality can negatively impact access to mental health services. The stigma associated with accessing mental health or substance abuse treatment in a small community can prevent women from seeking help. Overall, studies have shown that, among women with low income, accessing services in both urban and rural areas is difficult because of high costs, lack of insurance, and lack of transportation (Rosen et al., 2004).

MODELS

Many models have sought to explain substance abuse among pregnant mothers (Galea et al., 2003). Homelessness, unemployment, prostitution, and co-morbidity are aspects of the mother's functioning that affect parenting. Methadone maintenance treatment addresses these issues by connecting women with shelters, nutrition programs (e.g., WIC), and medical care. Methadone can lead to employment by eliminating the need to spend the day searching for drugs. However, it does not solve the need for

child care or societal support in order to successfully enter the work force.

The sociological model looks to explain prenatal substance abuse through social factors (Wallace, 1999). Methadone is a legal treatment that takes away the fear of criminal retribution and the subsequent alienation drug abusers feel. It can decrease stress and create an atmosphere of support and hope. Lack of acceptance in society has been cited as a reason why women do not seek treatment (Sheehan & Sheehan, 2013). Increasing the possibility that women will access treatment only increases the success of these women long-term. Policymakers and support groups have rallied around the cause in order to advocate for treatment not incarceration (Chavkin, 1990).

Lifespan or life course perspective can lead to the best understanding of contextual determinants and drug abuse (Lynch & Smith, 2005). In this model, timing is of utmost importance in explaining behavior and risk. For many decades, life course perspective has described a causal effect between early childhood exposure or experience and adulthood behavior or risk (Lynch & Smith, 2005). Many scholars posit a critical period framework within life course theory, stating that during this time frame crucial development can be affected by exposure to disease or abuse. Although many health care professionals shy away from tackling the shameful issue of substance abuse, it is imperative that screening occurs from the beginning.

CONTEXTUAL DETERMINANTS OF DRUG USE

Federal, state, and local policies and laws can produce a great effect on contextual, mediating, and individual-level aspects, either positively or negatively. Moreover, there has been an increasing focus on environmental and group factors in the analysis of public health problems. Epidemiologists can now weigh the importance of risk factors at individual and societal stages (Galea et al., 2003). As social determinants become more important in the public health field through incorporation into Healthy People 2020, researchers are attempting to ascertain which factors affect behavior most heavily.

The social environment encompasses concepts such as social capital, neighborhood disadvantage, income level, educational level, and socioeconomic status. As stated earlier, Galea et al.'s (2003) conceptual framework indicates that upstream variables mitigate much of the individual risk factors resulting in poor health outcomes. Mediating factors include social support and social networks (whether positive or negative) as they may intervene between the contextual level determinants and the individual's risk factors (i.e., mental health). Individual behaviors (e.g., drug use, breastfeeding) result from the predisposition associated with these risk factors, as we have seen in the literature reviewed in this article. Place and the physical environment, such as rurality, can shape an individual's social support system (i.e., social capital) which, in turn, can encourage or discourage drug use behavior. The strength of the model lies in the ability of the contextual variables to be tested empirically if given the appropriate tool.

SYNTHESIS OF CONTEXTUAL DETERMINANTS

Contextual determinants are social factors that predispose individuals to experience particular risk factors. For example, social deprivation is a leading cause of women abusing drugs. In their study of drug misuse in the United Kingdom, Dryden, Young, Hepburn, and Mactier (2009) determined social deficit through "four standard variables taken from census data including adult male unemployment, lack of car ownership, low social class and overcrowding" (p. 669). The vast majority of their study participants smoked cigarettes, lived in areas classified as the lowest socioeconomically, and consumed excessive alcohol during pregnancy. Yet, the study determined that extended stay in the hospital (although cost incurring) facilitates social work consults and connection with community organizations. Breastfeeding, which decreases length of stay for NAS infants, can also take up to 72 hours to establish a pattern. The increased stay for the mother is offset by the decreased intensive care stay for the infant (Dryden et al., 2009). Especially for low income, disadvantaged women, longer postnatal stays may produce better long-term outcomes for the family. Medicaid funding for this longer stay requires more research and lobbying for policy change. Therefore, policy can affect social deprivation, which creates social support, which in turn mediates the risk factors of drug abuse.

Yet, it has proven difficult for researchers to adequately measure the effects of contextual determinants. Galea et al. (2003), as stated previously, defined neighborhood disadvantage according to percentage of residents who fell below a certain income threshold. Moreover, neighborhood income has been used frequently as an indicator of neighborhood disadvantage; however, income level does not speak to the quality of housing or availability of services. Further progress is needed to define and measure contextual variables.

In addition, public awareness needs to be raised concerning policies that negatively impact substance abusers. In particular, welfare to work programs put women who are recovering addicts at a disadvantage. As a result of frequent co-existing mental illness and the social stigma of substance abuse, these women cannot fulfill the stringent requirements of their welfare funds. Ceasing their funds does not allow them any progress on the road to recovery, and endangers their children exponentially. Child care and transportation also are barriers in the welfare to work programs, especially for substance abusers. Societal stigma needs to change in addition to allowing more funding for child care subsidies and transportation. The state and local laws, more than national ones, need to be addressed, as they carry out policies and programs.

NURSING IMPLICATIONS

Community health nurses, mental health nurses, and nurses serving populations of pregnant women can use the framework of contextual determinants in their practice. Understanding the upstream factors that lead to the behavior of abusing drugs can lead to nurses who affect lasting change in their patient

population. Nursing can be involved in all aspects of policy development and implementation, addiction treatment, and prevention. We seek to provide care, and fully caring for our patients needs to encompass full understanding of their barriers to change. Competence related to the many factors that can result in drug-abusing behavior can lead to more cultural awareness in nursing practice. The contextual variables described in this article pose daunting barriers to health for pregnant women who are struggling with addiction. Improved health for pregnant, drug-abusing women requires many disciplines to come together, learn from each other, and move forward in a helpful direction.

CONCLUSION

A limitation of this study of contextual variables involving drug behavior is its theoretical nature rather than practical value. As it was not an integrative review, key studies may have been overlooked. Overall, the studies pointed to necessary change on the level of policy. As evidenced by the conceptual framework posited by Galea et al. (2003), societal attitudes, social capital, and other contextual variables can be changed through policy. But, policy also can influence social networks and individual risk behavior. Policies that penalize violent partners and provide more mental health services to low income women will address individual risk factors. Laws that place more social resources in disadvantaged neighborhoods will mitigate the effect of low income on substance-abusing women (Chavkin, 1990).

Methadone, as a treatment for opiate addicted mothers, is a safe and effective means to start the road to recovery. When seen within the social environment, methadone treatment programs address some of the risk factors and pre-existing conditions exhibited in substance abusing women. With knowledge of these individual level causes, research can continue to pursue solutions to the greater contextual and environmental issues.

Declaration of interest: The author reports no conflicts of interest. The author alone is responsible for the content and writing of the paper.

REFERENCES

- Burns, L., Mattick, R., Lim, K., & Wallace, C. (2006). Methadone in pregnancy: Treatment retention and neonatal outcomes. *Addiction, 102*(2), 264–270. doi: 10.1111/j.1360-0443.2006.01651.x
- Chavkin, W. (1990). Drug addiction and pregnancy: Policy crossroads. *American Journal of Public Health, 80*(4), 483–487.
- Dryden, C., Young, D., Hepburn, M., & Mactier, H. (2009). Maternal methadone use in pregnancy: Factors associated with the development of neonatal abstinence syndrome and implications for healthcare resources. *British Journal of Obstetrics and Gynaecology, 116*, 665–671. doi: 10.1111/j.1471-0528.2008.02073.x
- Eggleston, A. M., Calhoun, P., Svikis, D. S., Tuten, M., Chisolm, M., & Jones, H. E. (2009). Suicidality, aggression, and other treatment considerations among pregnant, substance-dependent women with post-traumatic stress disorder. *Comprehensive Psychiatry, 50*, 415–423. doi: 10.1016/j.comppsy.2008.11.004
- Galea, S., Ahern, J., & Vlahov, D. (2003). Contextual determinants of drug use risk behavior: A theoretic framework. *Journal of Urban Health, 80*(4), 50–58. doi: 10.1093/jurban/jtg082
- Greenfield, S., & Grella, C. (2009). Alcohol and drug abuse: What is “women-focused” treatment for substance abuse disorders? *Psychiatry Service, 60*, 880–882. doi: 10.1176/appi.ps.60.7.880
- Hill, P. (2013). Perinatal addiction: Providing compassionate and competent care. *Clinical Obstetrics and Gynecology, 56*(1), 178–185. doi: 10.1097/GRF.0b013e3182802da0
- Lynch, J., & Smith, G. D. (2005). A life course approach to chronic disease epidemiology. *Annual Review of Public Health, 26*, 1–38.
- Martin, S., Beaumont, J., & Kupper, L. (2003). Substance use before and during pregnancy: Links to intimate partner violence. *The American Journal of Drug and Alcohol Abuse, 29*(3), 599–617. doi: 10.1081/ADA-120023461
- National Survey on Drug Use and Health. (2013). *Trends in Substances of Abuse among Pregnant Women and Women of Childbearing Age in Treatment*. Washington, DC: Department of Health and Human Services. Retrieved from <http://www.samhsa.gov/data/spotlight/spot110-trends-pregnant-women-2013.pdf>
- Perreira, K., & Cortes, K. (2006.) Race/ethnicity and nativity differences in alcohol and tobacco use during pregnancy. *American Journal of Public Health, 96*(9), 1629–1636. doi: 10.2105/AJPH.2004.056598
- Pickett, K., & Pearl, M. (2001). Multilevel analyses of neighborhood socioeconomic context and health outcomes: A critical review. *Journal of Epidemiology and Community Health, 55*(2), 111–122. doi: 10.1136/jech.55.2.111
- Rosen, D., Tolman, R., & Warner, L. (2004). Low-income women’s use of substance abuse and mental health services. *Journal of Health Care for the Poor and Underserved, 15*, 206–219. doi: 10.1353/hpu.2004.0028
- Sheehan, M., & Sheehan, M. G. (2013). Management of the pregnant substance abusing woman. *Clinical Obstetrics & Gynecology, 56*(1), 97–106. doi: 10.1097/GRF.0b013e3182795878
- Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (2009). Treatment Episode Data Set (TEDS): 1997–2007. National Admissions to Substance Abuse Treatment Services, DASIS Series: S-47, DHHS Publication No. (SMA) 09-4379, Rockville, MD.
- Tetstall, E., Liu, A. J. W., An, E. I., Canalese, J., & Nanan, R. (2009). Pregnancy and neonatal characteristics of opioid-dependent Indigenous Australians: A rural and metropolitan comparison. *Australian and New Zealand Journal of Obstetrics and Gynaecology, 49*, 279–284. doi:10.1111/j.1479-828X.2009.01008
- United States Department of Health and Human Services, Office of Disease Prevention and Health Promotion. *Healthy People 2020*. Washington, DC. Retrieved from <http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=39>
- Wallace, J. (1999). The social ecology of addiction: Race, risk and resilience. *Pediatrics, 103*, 1122–1127.
- Wilbourne, P., Wallerstedt, C., Dorato, V., & Curet, L. (2001). Clinical management of methadone dependence during pregnancy. *The Journal of Perinatal and Neonatal Nursing, 14*(4), 26–45.