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A Multi-Methodological Study of a Possible Syndemic among Female Adult Flim Actresses

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A Multi-Methodological Study of a Possible Syndemic among Female Adult Film Actresses

by

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Dedication

To all the people in the world who struggle against seemingly insurmountable odds to succeed, when it seems impossible hold fast, keep your head down, work harder, because success is closer than you think.

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I would like to thank my committee for believing in and supporting me. Your investment in my future will never be forgotten. Dr. Baldwin, your support is truly limitless, thank you for helping me grow and teaching me lessons that will serve me for the rest of my life. Dr. Alio, thank you for being an incredible role model, and your invaluable contribution to my growth. Dr. Buhi, thank you for your wonderful guidance and your terrific support. Dr Sultan, thank you for helping me through this process, and providing important mentorship. Dr. Mbah, thank you, for taking the time to teach me and ensuring that I have the tools to succeed in the future. Melissa Johnson, Dr. Teri Malo and Dr. Mary Martinasek thank you for providing feedback, and helping me get to the finish line of this thesis. Mommy (Ann Basley) and Daddy (Ted Basley) thank you for supporting me in every way possible; you are the best parents in the world. Cristian Chandler, Emelda Curry, and Maisha Standifer thank you for being my teachers, supporters, and friends.

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List of Acronyms

AFI	Adult Film Industry
AIM	Adult Industry Healthcare Foundation
AOR	Adjusted Odds Ratio
ASA	Adult Sexual Abuse
CSA	Childhood Sexual Abuse
DV	Dependent Variable
FSW	Female Sex Workers
IPV	Intimate Partner Violence
IV	Independent Variable
OR	Odds Ratio
STI	Sexually Transmitted Infection

Abstract

Existing literature provides support for a possible syndemic among adult film actresses. Multiple studies emphasize that a combination of economic, social, and cultural issues work together in tandem to synergistically amplify HIV/STI risk in this vulnerable population. It is critical to acknowledge how the detrimental effects of the high prevalence of substance abuse, psychological distress, intimate partner violence, and childhood sexual abuse work together in a system to heighten HIV/STI risk among adult-film actresses. Additionally, issues including the retrogressive dynamic and unequal power and hegemony in the industry function as facilitators which lower the overall health profile of adult-film actresses. It is therefore important to explore the additive relationship between multiple psychosocial health problems of HIV/STI risk among adult-film actresses. The goals of this study are to explore the tenets of the adult-film actress syndemic and use the ecosocial model to organize the associations between psychosocial health problems and HIV/STI risk.

This thesis utilizes a two-phase, transformative explanatory sequential mixed methods design which combines multivariable logistic regression and ethnography to understand HIV/STI risk and how depression, childhood sexual abuse, intimate partner violence, and substance use are embodied in the daily lives of adult-film actresses. The quantitative component of this study utilized data collected from a survey of 134 adult-film actresses from the United States. Statistically significant relationships were seen

between the independent variables (psychosocial problems) and the dependent variables (i.e., number of personal sex partners, perception of HIV risk, and participation in other sex work). Other relevant quantitative findings included the statistically significant relationships between the syndemic variable and multiple dependent variables.

The second component of this study consisted of an ethnography that addressed the theoretical deficiencies in the quantitative phase. Eight adult-film actresses living in the United States were recruited through a testing agency located in Florida, a non-profit located in California, and social networking sites (You tube, Twitter, Facebook, and MySpace) and were then interviewed by phone. The ethnography provided substantive information on the processes which potentially undergird and fuel the syndemic among adult-film actresses including the link between traumatic childhood experiences, substance use and depression. Additional qualitative findings also included elucidating how components of occupational culture increase HIV/STI risk among adult-film actresses. Prominent qualitative themes included traumatic childhood experiences, tenuous romantic relationships and multiple rapes.

The integration of both phases of this study provide information on how the interplay between micro, meso and macro level factors work together in a system to additively augment HIV/STI risk among adult-film actresses. Findings from this study have the potential to influence risk reduction policies that could improve the lives of adult-film actresses.

Chapter One

Introduction

In the past, pornography was a hidden part of American culture, but with the advent of increased online content, pornography has ballooned into a multibillion dollar industry. Although pornography is currently a conspicuous part of American culture, the individuals (adult- film actresses) most integral to its success continue to be ignored by scholars and viewers alike (Wetizer, 2009). Fortune 500 companies and viewers are content merely deriving pleasure from adult- film actresses without asking the all-important question: does this pleasure have a price? Adult- film actresses pay the hefty price of increased occupational risks, namely high rates of sexually transmitted infections (STIs), substance abuse, and psychological distress (Grudzen et al., 2009). Consistent re-infection of STIs weakens the immune system and subsequently increases vulnerability to HIV infection. Four individuals paid the most significant price when they became infected with HIV as a result of the 2004 HIV outbreak in the industry. Although quarantine was placed on the industry as a result of the previously mentioned outbreak, the vast majority of heterosexual sex scenes in the AFI fail to use condoms. The AFI utilizes monthly testing as the sole HIV/STI prevention method (Grudzen et al., 2010).

Despite an increased amount of exploration of HIV/STI risk among sex workers by social scientists and public health researchers, current literature focuses primarily on street level prostitution (Sander et al., 2009; Weitzer, 2009). Few studies explore the integration of the social and health consequences of working as an adult-film actress (Alegeria et al., 1994; Creswell, 2009; Mimiaga et al., 2010; Romero Daza et al., 2003; Weitzer, 2009). Two studies have examined qualitative and quantitative dimensions of risk in this population (Grudzen et al, 2009; Grudzen et al, 2010). Grudzen et al's (2009) qualitative study elucidates multiple challenges that individuals who perform in adult-films face including mental health issues (anxiety and depression), substance abuse problems (methamphetamines and cocaine), disintegration of social networks with families and friends, accumulation of debt, and physical repercussions (burns from constant vibrator use and anal tears) (Grudzen et al, 2009). Grudzen et al. (2010) explored the multifaceted issues of Adult Film Industry (AFI) actresses quantitatively by examining rates of mental illness, childhood sexual abuse, adult sexual abuse, intimate partner violence and substance abuse among women in the industry compared to a larger sample of California women. Women in the AFI had significantly higher rates of substance abuse and depression than their female counterparts. Although Grudzen et al. (2010) explored many issues that women in the adult film industry face, these studies failed to integrate qualitative and quantitative methods to comprehensively explore the interaction between HIV/STI risk and its covariates (intimate partner violence, substance abuse, childhood sexual abuse, and psychological distress). The use of mixed methods fuses the strength of quantitative risk analysis studies with the power of qualitative ethnography, allowing for detailed exploration while providing a nuanced definition of

HIV/STI risk in the adult- film community. To my knowledge, no study has combined anthropological and public health methodologies to "unpack how" multiple socio-health determinants work in proxy to shape the lives of adult-film actresses, and thereby perpetuate HIV risk (Rhodes et al, 2005 p. 1033).

Statement of the Problem

Disease and risk discriminate (Singer, 2009). The prejudice of disease and risk burden can be observed through the asymmetrical distribution of Sexually Transmitted Infections (STIs) and HIV/AIDS risk among impoverished, oppressed or marginalized populations (Goldstein et al., 2011; Guarda- Gonzalez et al., 2011; Romero Daza et al., 2003; Singer, 2009). Nationally, Chlamydia and Gonorrhea continue to be the most frequently reported STIs (Klausner & Katz, 2011). For instance, in 2009 alone, 1.2 million individuals became infected with Chlamydia and 300,000 with Gonorrhea (Goldstein et al., 2009; Klausner & Katz, 2011). In regard to new HIV infections in the United States, researchers note that approximately 56,300 new HIV infections occur annually (Klausner & Katz, 2011, p.1). Significant racial disparities, furthermore, exist in the infection rates for HIV/STIs. The Centers for Disease Control report on STI trends, referenced STI disparities in black women due their disproportionate burden of Gonorrhea (2,613.8 per 100,000 among 15-19 year olds and 2,548.7 per 100,000 among 20-24 year olds) and Chlamydia (10,629.7 per 100,00 among the 15-24 age group) (CDC, 2009). The asymmetric burden disparity in the Black population is also mirrored in HIV/AIDS rates, for instance Blacks only comprise 12 % of the total US population, but contribute to nearly 50 % of individuals "living with HIV in the US" (CDC, 2009).

Numerous studies and reports attribute the global and domestic HIV/STI disparity among ethnic and sexual minority communities to a myriad of factors including substance use, mental health issues, and lack of access to healthcare (Butler, et al., 1997; CDC, 2009; Gonzalez-Guarda et al., 2011; Singer et al., 2006).

HIV/STI Disparities among Sex Workers

Due to prevalent substance abuse, intimate partner violence, and increased number of sexual partners, female sex workers(FSWs) often experience higher rates of Gonorrhea and Chlamydia than their non-sex worker counterparts (El Bassel, 2001; Romero Daza et al., 2003; Strathdee et al., 2008; Weitzer, 2009). According to Weitzer (2009) and Sanders et al. (2009), FSW literature overemphasizes the intersection between HIV/STI seropositivity and risk factors among street level prostitutes, thus creating gaps in the literature about socio- health risk for other types of sex workers, including exotic dancers and adult-film actresses (Sanders et al., 2009; Weitzer,2009). Few studies have focused on the integrated social and health risks of adult- film actresses, and an even smaller amount have emphasized the unique occupational issues (i.e., STI health disparity as expressed by elevated Chlamydia and Gonorrhea rates) faced by these understudied populations (Weitzer, 2009).

HIV/STI Disparities among Adult-Film Performers

Similar to the general population, women in the AFI continue to suffer from higher STI rates than their male counterparts. Even more troubling, women continue to become re-infected with STIs at higher rates than their male counterparts (Goldstein et

al., 2011; Kerndt, 2005). Goldstein et al. (2011) compared STI rates among women in the adult film industry to other non-sex working inhabitants in Los Angeles County (Goldstein et al., 2011). Among AFI performers in California, 73 % of males and 51 % of females had one or more Chlamydia infections, and 22 % of males and 40 % of females had at least one Gonorrhea infection (Goldstein et al., 2011 p. 3). The STI health disparity is also reflected in the heightened rates among sex workers when compared to their non-sex worker peers. Among AFI performers, Chlamydia incidence was 8.5 times higher than among individuals 18-29 years old in the LA County area, and 34 times higher than rates of all inhabitants in LA County (Goldstein et al., 2011. p 2). In regard to Gonorrhea incidence, AFI performers had 18 times more annual occurrence than individuals in the 18-29 year age range residing in LA County, and 64 times more annual occurrence than all individuals in the region (Goldstein, 2011 p 3). These disparities are also observed between genders, with nearly 60 % of Chlamydia cases, 35 % of Gonorrhea cases, and nearly 10 % of co-infection of the STIs found among female performers (Goldstein et al., 2011, p. 3). In every STI category except Chlamydia, AFI actresses bear the disproportionate brunt of infection. When compared to AFI actors, actresses are also 27 % more likely to have a repeat STI infection within one year. AFI actresses also have a faster median time to repeat Sexually Transmitted reinfection which is 21 days earlier than AFI actors (Goldstein et al., 2011 p 4).

Researchers attribute the asymmetric STI rates among women to their physical vulnerability to HIV/STI contagion as a result of repeated, extended participation in unprotected anal and vaginal sexual events, resulting in an increased likelihood of chaffed or broken vaginal or anal skin (Goldstein et al., 2011, p. 1). Furthermore, the

increased STI burden among adult-film actresses occurs within a socio- cultural context and is also influenced by power imbalances in the industry, female biology, economic aspects, and inconsistent condom use (Grudzen et al., 2008; Romero Daza et al., 2003; Singer et al., 2009). Numerous studies suggest that merely addressing the biological issues of STIs would be inadequate; consequently, current recommendations propose that researchers incorporate a multitude of issues (social, biological and epidemiological) to adequately address increased HIV/STI rates in marginalized populations including African Americans, gay men, and sex workers who all suffer from disproportionately high STI rates (Mustanski et al., 2007; Senn et al., 2010; Romero Daza et al., 2003; Stall et al.,2003). This study contends that the combination of the social, cultural, and biological issues work as an additive system to fuel the health disparity of high STI rates among AFI actresses. For the purpose of this study, HIV and STI risk will be referenced simultaneously because STI infections increase one's susceptibility for HIV, and both are contracted through sexual contact and share a myriad of similar behavioral risk factors, including drug use and partner violence (Singer, 2009; Stall et al.,2003 Mustanski et al.,2007; Senn et al.,2010).

The issues of disproportionately high Gonorrhea and Chlamydia rates and subsequent increased HIV risk among females in the Adult Film Industry is multifaceted and complex and requires an ecosocial perspective which explains how the integration of social and epidemiological factors contribute to the unequal distribution of HIV/STI risk among AFI actresses (Krieger, 2005, p. 354; Poundstone et al.,2004). This perspective will be utilized to explore both quantitative and qualitative dimensions of risk and health determinants of women in the AFI. After all, it is this combination of social and physical

exposures that determine patterns of disease and disability in population (Krieger, 2005, p. 354). Lastly, the ecosocial perspective focuses on the interaction between the multiple levels of health determinants for this population, and provides a scope through which researchers can understand the *embodied* existence of epidemiological variables working in tandem with the social context that shapes them (Krieger, 2008, p. 227). Although many women only perform in one film, the aftermath of untreated STIs may cause a lifetime of adverse outcomes including pelvic inflammatory disease or increased susceptibility to HIV (CDC, 2009).

History of HIV Outbreaks in the Adult Film Industry

STI infection enhances an individual's risk for HIV, and although, HIV outbreaks are rare in the industry, outbreaks have occurred in 1998, 2004, 2009 and most recently in 2010 (California Watch, 2010; Kerndt, 2008). The 2004 episode is the most extensively studied outbreak. Taylor et al's (2007) epidemiological study documented the 2004 outbreak of HIV in the AFI and connected the index case (an adult –film actor) to the thirteen women who were exposed to HIV through unprotected sexual contact with this individual (Sibley, 2009). The male tested negative for HIV in February and March of 2004, and tested positive on April 9, 2004 (Taylor et al, 2007 p 71). The index case had unprotected sex with 13 female partners who all tested negative for HIV in the preceding 30 days; 3 people subsequently tested positive for HIV yielding a 23 % infection rate for the most recent outbreak. Although the previously mentioned outbreak of HIV is very important, the elevated HIV risk through repeat infection of STIs is a more frequent occurrence among AFI actresses (Goldstein et al., 2011). Outbreaks also occurred in

2009 and 2010 and according to the Los Angeles Health Department nine AFI performers have been infected with HIV since the 2004 outbreak (California Watch, 2010).

Rationale for the Study

This student's own previous research (Sibley et al., 2008; Sibley, 2009), and the HIV/STI risk disparity among adult film actresses when compared to AFI male counterparts and non-AFI women in Los Angeles, prompted the researcher to begin this study. The researcher had an opportunity to conduct a preliminary ethnographic study from October-November 2008, among five sex performers (3 men and 2 women) in the Adult Film Industry. Salient findings included drug use, power and hegemony, and the lack of condom use in the heterosexual Adult Film Industry. Respondents provided insight into prevalence and severity of drug use (Sibley et al., 2008). According to the pilot project, AFI actors and actresses engage in substance abuse for different reasons, Figure 1 depicts the type of drugs women reported taking (methamphetamines and cocaine) and their rationale for taking these drugs (increased energy for scenes, weight loss, and approval from directors) (Sibley et al, 2008).

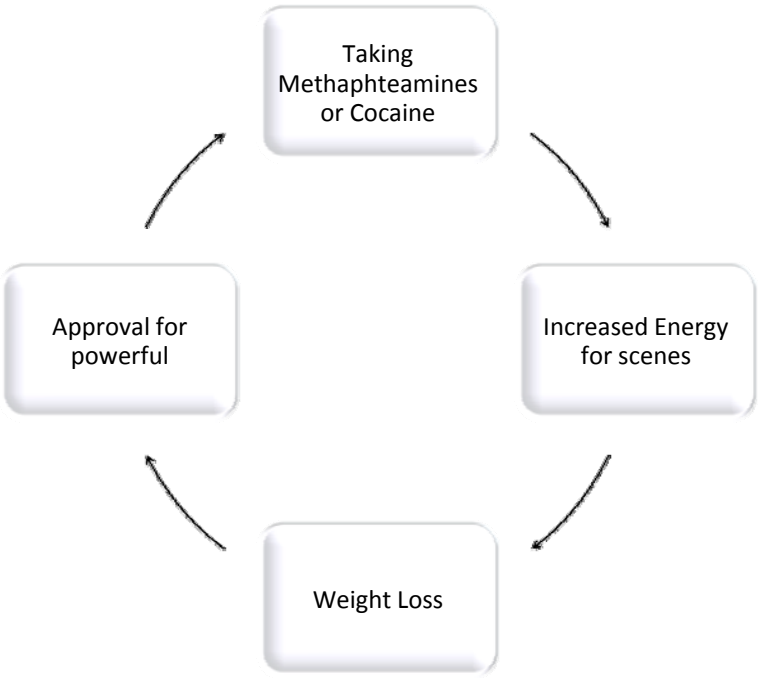

Figure 1. Drug Use Cycle for Women. This figure describes the processes that perpetuate drug among AFI actresses.

The qualitative data from this pilot study corroborated Grudzen et al's qualitative findings of minimal condom use in the heterosexual industry (Grudzen et al, 2009). The pilot study also elicited a significant amount of information on how sociocultural factors including power inequality, economic motivations, and fear of job loss decreased condom use and fueled the health disparity of heightened HIV/STI rates in the Adult Film Industry. Findings detailed in Figure 2 suggest power and hegemony may constrain individuals' agency to use condoms in the AFI.

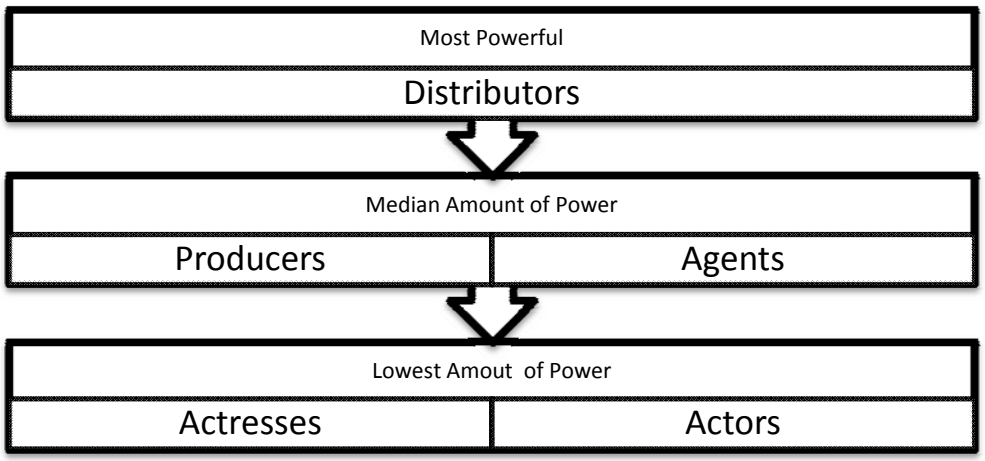

Figure 2. Power Structure in the Adult film Industry. This figure describes the power structure of the AFI.

The themes of power and hegemony show how the dominance of distributors, producers and agents in the industry allows them to directly or indirectly coerce actresses into having unprotected sex (Sibley et al., 2008; Grudzen, et al., 2009). *"If you use condoms you don't work,"* admitted Deanna (AFI actress). The terms of power and hegemony are interrelated. The term power relates to the inequitable use of economic, social, or influence to control condom use, and scene type in the industry. The term hegemony refers to the capability of a powerful group (producers and distributors) use of power to subjugate the less powerful (AFI actresses); additionally, the term hegemony also refers to the "capacity" of the powerful group to make the power inequity between the groups seem normal (Erickson & Murphy, 2008 p 129). Gaps in the pilot ethnographic findings perpetuated a more comprehensive examination of the role of socio-cultural and biological factors in amplifying HIV/STI risk among AFI actresses. From these preliminary findings, more questions emerged, including how syndemics are

embodied (expressed qualitatively), and how the components of the female AFI syndemic are associated with HIV/STI risk.

Purpose of the Inquiry

The purpose of this inquiry was to gain a deeper understanding of HIV/STI risk among adult-film actresses. Gonorrhea and Chlamydia incidence among adult film actresses is higher than their female non-sex worker counterparts (Goldstein et al., 2011). The integration of issues identified in the pilot project and the existing research literature on STI disparities provides evidence of increased HIV/STI risk among AFI actresses. The intent of this mixed methods transformative explanatory sequential study was to learn about the mechanisms through which biological, sociocultural, and political economic factors work together in a synergistic system to amplify HIV/STI risk among adult film industry actresses (Creswell, 2009). This study is composed of two discrete phases: quantitative and qualitative. In this particular design, the first phase consisted of analysis of quantitative (numeric) data. Phase II consisted of qualitative (text) data collection and analysis to expound upon the quantitative findings from the initial phase. The methodological rationale for this study design was that the quantitative data supplied a broad-spectrum understanding of the research issue. The addition of qualitative data allowed for richer comprehension of HIV/STI risk among adult film actresses, helping to sharpen and explicate statistical results by delving deeper into these women's perspectives (Creswell & Plano Clark, 2011, p. 104; Mayhew et al., 2009; McGraw, Zvonkovic, 2000; Weine et al., 2005).

Study Aims

The overarching aims of the study are threefold 1. To understand the most prevalent risk (psychosocial health problems) of adult film actresses 2.To understand how these prevalent psychosocial health problems additively increase HIV/STI risk among adult film actresses, and 3. To understand how adult film actresses negotiate and cope with the risk behavior in the adult film actress syndemic.

Quantitative Hypotheses

The following hypotheses (tenets of syndemic theory) will be tested

1. The psychosocial problems (depression, childhood sexual abuse, intimate partner violence, substance abuse) are closely associated with each other.
2. The psychosocial problems are positively and significantly related to the outcome variables (indicators of HIV/STI risk).
3. The psychosocial problems work synergistically in a system; consequently, when psychosocial problems are combined into a scored (0-4) syndemic variable, it will be positively and significantly related to outcome variables.
4. With the addition of each psychosocial problem, the odds of each outcome variable will increase (i.e. odds for syndemic 3 will be lower than odds for syndemic 4 on any given outcome variables).
5. All psychosocial problems do not share equal importance with each dependent variable. Some psychosocial problems amplify odds of HIV/STI risk more than others.

Qualitative Objectives and Research Questions

The following qualitative research objectives and questions build on quantitative findings to explore the political context and cultural logic that drives the quantitatively defined syndemic.

Qualitative Research Objectives

Objective 1: To identify and comprehend sociocultural factors which contribute to and or constrain the increased HIV/STI risk in the adult film community.

Objective 2: To identify and comprehend the sociocultural factors within the AFI that constrain or perpetuate condom use and condom negotiation in the AFI.

Objective 3: To understand Adult Film actresses' experience with STI seropostivity.

Objective 4: To understand the protective and survival strategies of adult-film actresses.

Mixed Method Objectives and Research Questions

The following Objective and Research Questions will be utilized to fuse quantitative and qualitative questions

Objective 1: To understand if and how risk behaviors work together in the quantitatively defined syndemic to increase HIV risk.

Research Questions

1. What the most prevalent HIV/STI risk behaviors of the women in AFI?
2. What are the components of the syndemic for women of the AFI?
3. How do they function in a system?

Significance of the Study

This study has the potential to contribute to syndemic theory, sex work, and HIV/STI risk literature through providing a rich mixed methods inquiry into the understudied population of adult film actresses. The study will contribute to the syndemic literature through integrating the mixing of qualitative and quantitative methods into one inquiry, which will provide the basis for additional mixed method syndemic studies. The study will also contribute to the nuanced sex work literature, which acknowledges the agency of female sex workers to negotiate their occupational risks, and critiques previous studies that merely focused on decontextualized risk which promotes pathology of FSWs (Padilla et al., 2008; Sanders et al., 2009). The study will also supplement the HIV/STI literature on marginalized populations through promoting the use of theories which examine the interconnections between common social and health risk factors and how these factors work as a system to additively increase HIV/STI risk in similar populations.

Chapter Two

Relevant Literature and Conceptual Framework

This chapter consists of three sections: the philosophy of the literature review, the literature review, and the conceptual framework of the study. Section one details the philosophy which influenced the selection of articles and the content of the entire study. Section two of the chapter provides the findings from existing studies which describe how sociocultural, biological, political, and economic factors have contributed to elevated rates of STIs and increased HIV vulnerability in marginalized groups (similar to AFI actresses), namely street level prostitutes and Young Men Who Have Sex with Men (Mustanski et al., 2007; Romero Daza et al., 2003; Stall et al., 2003). The third section of the chapter examines the myriad of risk factors for female actresses in the AFI identified in the literature through the socio-ecological model as well as the ecosocial and syndemic theories.

Section I: Overview of Relevant Literature

Philosophy of Relevant Literature.

The philosophy of the literature review is critical of the past literature on HIV/STI risk among sex workers which solely emphasizes the negative aspects of sex work (including increased HIV/STI risk), consequently obfuscating the more complex, multifaceted view of how the culturally embedded interplay of economic and power

structures are sustained in the sex market. Further, this thesis acknowledges how sociocultural aspects contour HIV/STI risk in the adult film industry (Parker, 2001; Sanders et al., 2009; Weitzer, 2009). Although this study discusses the "difficulty and distress of sex work and the connections between occupational exposures and poor health" among adult film actresses, this study also works to avoid the common scholarly pitfall of the sole focus on risk without acknowledging the sociocultural context that influences HIV/STI risk and risk behaviors (Sanders et al., 2009 p 7; Singer, 2009; Weitzer, 2009). In addition, this thesis examines how risk behaviors function in a synergistic system which may amplify HIV/STI risk among adult film actresses (Singer et al., 2006; Singer, 2009). The study also critiques the oversimplified deviant victimhood of adult film actresses, and examines how actresses negotiate psychological, biological, and occupational culture risk (Sanders, 2004, p. 558). Further, the literature selected for this synthesis of existing studies on analogous marginalized populations also elucidates how the macro-level political and economic barriers negatively influence condom negotiation and may increase extreme sex acts among AFI actresses. While adult film actresses are more vulnerable to HIV/STI risk than their male counterparts, this study does not frame these women as victims of the political and economic forces, but instead acknowledges their agency and wherewithal to react, respond, and alter their risk environments (Baer et al., 2003).

Existing Studies on HIV/STI Risk among Marginalized Populations.

A significant number of studies emphasize the association between higher rates of substance abuse, childhood sexual abuse, psychological distress, intimate partner violence, and rape risk covariates among Female Sex Workers (FSW). (Jin et al., 2011; Liao et al., 2011; Shannon et al., 2011). These psychosocial health problems increase the likelihood of FSW participating in risky sexual behaviors including early multiple sex partners, and unprotected sex in both domestic and international contexts (Weitzer, 2009).

Psychosocial health problems are often interrelated and FSWs often concurrently experience multiple risk factors in their lives. For instance, high prevalence of drug use, childhood sexual abuse, rape, and psychological distress have been identified as HIV/STI risk factors among FSW in New York (El Bassel, 2001). The study also explores the interrelation of the variables and reports increased odds of involvement in intimate partner violence and experiencing mental health issues among substance abusing FSWs. FSWs exposed to childhood sexual abuse were also more likely than their non-abused colleagues to be raped by a customer and to endorse substance abuse.

The link between drug use and risky sexual behavior is also highlighted in the other female sex work studies (Romero Daza et al., 2003; Strahdhee et al., 2008; Shannon et al., 2011). For example, an ecological study of methamphetamine use among street level Canadian FSWs revealed that females who endorsed methamphetamine use were more likely to be marginalized by homelessness and to participate in unhealthy relationships in which a partner acquired substances. FSWs were also two times more likely to endorse cocaine injection and three times more likely to endorse heroin injection

than their non-methamphetamine using counterparts. This study also established the link between high risk sexual contact and increased odds of methamphetamine-using FSWs having a partner who procured drugs. The authors explain that HIV/STI risk may be elevated in these drug procuring dyads due to the possibility of the dominance of the drug procurer constraining FSWs ability to negotiate condom use.

The interplay between intimate partner violence and substance abuse among FSWs is also emphasized in multiple studies (El Bassel, Gilbert &Wasde, 2000; Singer, 2009). Literature on FSWs who experience intimate partner violence suggests that these women may be more likely to have experienced childhood sexual abuse. Moreover, women who have experienced both childhood sexual abuse and intimate partner violence may be more likely to use drugs to find solace from their pain and lingering traumas (Madu & Peltzer, 2000; Singer, 2009). Substance abuse may also be a trigger for an individual to perpetrate intimate partner violence (Singer, 2009). Furthermore, the unbalanced power differentials in intimate partner violence dyads may constrain condom negotiation and sex act selection (Singer, 2009).

Shift to Synergism and Syndemics.

The previously mentioned epidemiological studies represent the traditional epidemiological analysis of common psychosocial health problems, which often identifies a one –to- one relationship between a dependent variable and independent variables. The concept of syndemics goes beyond examining one- to- one relationships between the psychosocial health problems and HIV/STI risk, and conceptualizes commonly observed risk factors (childhood sexual abuse, depression, intimate partner

violence, and substance abuse) in marginalized populations as epidemics that work together in a system to additively increase HIV/STI risk in economically and/or socially marginalized communities (Singer, 2009). The syndemic studies that follow represent a shift from the exploration of the traditional epidemiological triad to examining the synergistic, "disease interactions" between the psychosocial health problems and their enhancement of HIV/STI risk (Singer, 2009 p 227). Syndemic theory differs from traditional epidemiological exploration through exploring how psychosocial health problems each singularly increase HIV/STI and the likelihood that FSWs are involved in another psychosocial health problem (Romero Daza et al., 2003; Singer et al., 2006). For instance a FSW who has experienced childhood sexual abuse has an increased probability of experiencing rape as an adult (El Bassel et al., 2001; Singer, 2009). Additionally, FSWs who experience rape or childhood sexual abuse are also more likely than their non-sexually abused counterparts to utilize drugs as a way to self-medicate to dissipate anguish and distress from childhood sexual abuse, intimate partner violence, or rape (El Bassel, 2001; Kreiger, 2001; Singer, 2009). Individuals who have experienced psychosocial health problems are at heightened risk of engaging in risky sexual behaviors as compared to individuals who have never experienced these traumas (Singer, 2009). The foundation of syndemic theory is the synergy between psychosocial health problems, social inequity and social marginalization, and their collective role in augmenting HIV/STI risk (Singer, 2009).

Traditional epidemiological studies fail to explore the additive, synergistic relationship between concurrent, intertwined psychosocial health problems and HIV/STI risk in FSWs (Meyer et al., 2011 p 1). The term syndemics comes from Critical Medical

Anthropology and the political economy of health theoretical frameworks and refers to synergism between two or more epidemics in a population that function as a system to elevate HIV/STI risk (CDC, 2008). Furthermore, the theory posits that the endorsement of four psychosocial problem increases HIV/STI risk more than the endorsement of one psychosocial health problem among socially and economically marginalized communities (Mustanski et al., 2007; Senn et al., 2010; Stall et al., 2003). Romero-Daza et al. (2005) make the case for using the substance abuse, violence and AIDS (SAVA) syndemic to understand HIV risk among sex workers, explaining that "street level prostitution provides a context in which three components (substance abuse, violence and AIDS) of the SAVA syndemic converge in a mutually reinforcing pattern that greatly magnifies the health risks for those in its midst" (Romero Daza, 2005 p 161l sic). Both Singer (2009) and Romero Daza et al. (2005) also highlight the relationship between violence and participation in sex work and their role in frequently reinforcing substance abuse (Romero-Daza et al., 2005;Singer,2009). Similarly, these psychosocial health problems respond synergistically "with one another, each one mutually reinforcing the others to create a syndemic that puts sex workers at a greatly increased risk for HIV" (Sibley et al., 2008 p 2).

Numerous studies in Public Health, Medical Anthropology, and Medical Sociology go beyond the individualized narrow psychological models (i.e., Health Belief Model, Theory of Reasoned Action/Theory of Planned Behavior, and Transtheoretical Model) of HIV/STI risk which fail to identify health behavior as socially situated in multiple levels of influence for HIV/STI risk among sex workers and other marginalized populations (Burke et al., 2009). A significant amount of Critical Medical Anthropology

literature has utilized the political economy of health model to highlight how even when faced with the issue of heightened STI risk in the AFI individuals have the agency to combat and influence the social conditions of their social marginalization and poverty (Baer et al., 2003). Syndemic theory also acknowledges the "dynamic, fluid" nature of the intersection between social context and HIV/STI psychosocial health problems (Burke et al., 2009 p 62S).

It is also important to acknowledge the interconnected terms of unequal power distributions and hegemony and their role in enhancing HIV/STI risk among marginalized population. Hegemony refers to the process by which dominant individuals or institutions enact their power on marginalized individuals and reassert the underlying cultural logic that unequal access to power, economic capital, and increased health risk are inherent to individual's everyday lives. (Erickson & Murphy, 2008 p 179). Hegemony also covertly constrains an individual's agency and work subtly to persuade the marginalized group that their oppression is natural (Erickson & Murphy, 2008 p 179). Both hegemony and power work together to perpetuate the syndemic among marginalized populations. Lastly, both also work to continue the HIV/STI health disparity.

Existing Syndemic Studies.

Traditionally, syndemics have been explored qualitatively through anthropological literature examining the additive effects of psychosocial problems working synergistically to increase of HIV/AIDS risk in marginalized communities, including men who have sex with men (MSM), prostitutes, and African Americans

(Campbell et al, 2008; Gielen et al., 2007; Meyer et al., 2011; Mimiaga et al., 2009; Romero Daza et al, 2003;Singer et al, 2006).It is important to understand, however, that syndemics can be investigated with both quantitative and qualitative methods. Qualitative studies are often utilized to contextualize the relationships and nuances of the entangled conditions between HIV/STI risk, substance abuse, intimate partner violence, childhood sexual abuse, and, mental distress (Campbell et al., 2007; Meyer et al., 2011; Singer et al., 2006). Quantitative studies test the bivariate and multivariate additive relationships between psychosocial problems and HIV/STI risk (Mustanski et al., 2007; Senn et al., 2007; Stall et al., 2003).

A number of syndemic studies have highlighted how psychosocial health problems and social factors (unequal power distribution, hegemony and social marginalization) work together to perpetuate enhanced HIV/STI risk (Meyer, 2011; Mustasnki et al., 2007; Romero-Daza et al., 2003). Salient findings highlight the bidirectional relationship between childhood sexual abuse and increased likelihood of adult sexual abuse (Meyer et al., 2011). Studies also discuss the reinforcing loop between intimate partner violence, increased drug use, decreased condom negotiation ,and the use of drugs as coping mechanisms to deal with the these traumas as an integral part of the sex worker syndemic (Gielen et al.,2007; Guarda-Gonzalez et al.,2011; Meyer et al.,2011 p 2). Moreover, substance abuse may also increase the likelihood for FSWs to become involved in intimate partner violence relationships (Meyer et al., 2011). The FSW syndemic literature also emphasizes that substance abuse by the intimate partner violence perpetrator often increases the severity and frequency of intimate partner violence (Gielen et al., 2007; Romero Daza et al., 2003).

Collins et al (2005). discovered that both substance abuse, and adult sexual abuse increased HIV/STI risk as defined by increased sex partners and "non-condom use" among women by as much as 25%(Collins et al.,2005;Meyer,2011 p 3). Stall et al. (2003) and Mustanksi et al. (2007) utilized multivariate logistic regression to examine syndemics in the marginalized communities of Young MSM and Urban MSM. Findings from both studies suggest the existence of a syndemic MSM population. Stall et al. (2003) found that with the addition of each psychosocial health problem (poly-drug use, depression, intimate partner violence, and childhood sexual abuse), odds of high risk sex (unprotected sex) and HIV prevalence increased (Stall et al., 2003). Mustanski et al. (2007) reported that with the addition of each of psychosocial health problem (substance abuse, psychological distress, partner violence, and sexual assault), the odds of having multiple anal sex partners increased by 24% (Mustanski et al., 2007 p41). The addition of each psychosocial health problem also increased the odds of participating in unprotected anal sex and HIV seropositivity by 42%, (Mustanski et al., 2007 p41). It is important to note that both Stall and Mustanski expanded the SAVA syndemic by including relevant epidemics (childhood sexual abuse and polydrug use) to HIV/STI risk for their population (MSM). Senn et al. (2010) reported a 20% increased risk of having multiple sexual partners with the addition of each psychosocial health problem among patients at an urban STI clinic (Senn et al., 2010 p5). Johnson et al (2003) suggest that a syndemic of "intimate partner violence, depression and substance abuse" worked synergistically to enhance HIV/STI risk among African American women (Meyer et al., 2011 p 7).

Syndemic literature includes a substantially larger number of qualitative studies as compared to a smaller number of quantitative studies that examine possible syndemics in

marginalized populations. Numerous qualitative studies describe partner violence, substance abuse, psychological distress, and childhood sexual abuse as co-occurring epidemics that work in a reinforcing loop to enhance HIV/STI risk in marginalized communities (Collins et al, 2003; El Bassel et al, 2001; Gielen et al, 2003 ;Mimiaga et al, 2009; Romero Daza et al, 2003; Singer et al, 2006,). Both quantitative and qualitative studies demonstrate that populations rarely experience one issue, but explain that marginalized populations often concurrently experience multiple psychosocial health problems that work synergistically to amplify HIV/STI risk. This study adds the ecosocial perspective (a socio- ecological variant that acknowledges embodiment, power imbalances and the integration of social and biological issues) to syndemic theory to clarify how the multiple levels of the syndemic system operate to magnify HIV/STI risk.

Existing literature on women in the AFI corroborates the need for a multilevel theory to study the complex issues that exist among this population. For example Grudzen et al. (2008 p.10) conclude that, "health risks among performers are multiple and similar to sex workers in illegal industries." Grudzen et al. (2008) also present data that suggest that a syndemic entailing violence and physical trauma, substance abuse, HIV and other STDs, plastic surgery, mental and emotional health risks, social health risks, and financial insecurity exists among AFI actresses. The study notes that women in the industry are at particularly high HIV/STI risk. Grudzen et al's study also reports that AFI actresses are at increased risk for other deleterious occupational hazards including broken social networks and debt which also facilitate HIV/STI risk. Grudzen et al's (2008) findings of all psychosocial health problems contributing to HIV/STI risk among

AFI actresses mirror Romero Daza et al's(2005) findings of presence of the SAVA syndemic among street level prostitutes .

Grudzen et al. (2008) suggest that minimal condom use in occupational environments may also translate to minimal condom use in the personal sex lives of sex performers in the industry, thereby connecting the AFI to the broader society and increasing the HIV/STI risk of non-sex workers who engage in sexual activity with AFI actresses. The previously mentioned study also suggest that substance abuse and the reported mental health problems (post-traumatic stress disorder, bipolar disorder, depression, and suicide) often co –occur, and other studies also corroborate that drug use occurs more frequently in individuals have mental health issues (El Bassel et al.,2011;Grudzen et al., 2008; Sibley et al, 2008). Grudzen et al's(2008) findings note that female adult film performers experience many of the same health risks as other sex workers, including the SAVA syndemic described by previous researchers (Romero-Daza et al., 2005; Sibley et al., 2008; Singer & Romero-Daza 1997), and that these risks need to be explored using a multilevel theory that can take into account the complexity of multiple co-occurring epidemics. Although Grudzen et al (2008) acknowledge all aspects of the SAVA syndemic, this qualitative study fails to recognize the interaction between social and biological factors to additively enhance HIV/STI risk.

Geographical Differences in the AFI.

Despite production centers in Brazil and the Czech Republic, Los Angeles remains the bustling core of the AFI, followed by Miami and Tampa Florida. A large number of women travel between Florida and Los Angeles to diversify their work

portfolios. The type of work in Florida and Los Angeles differs, with Florida producing more web -based film content and Los Angeles producing more full-length films (Grudzen et al., 2009). However, both types of work do occur to some degree in both locations. Both locations utilize monthly HIV/STI testing as their primary HIV/STI prevention method. Similar to other transient populations, a large number of women split their time between Los Angeles and Florida (Sibley et al, 2008). Although Florida and California are quite distant geographically, the multidirectional flow of employment and adult film actresses "distort the boundaries between the two locales" and form an economic bridge between the two places (Sibley et al., 2008 p 9, 10)

Section II: Conceptual Framework

Ecosocial Theory.

This portion of the chapter presents definitions of the ecosocial theory, the syndemic theory, and the socio -ecological model that compose the conceptual framework of thesis. The ecosocial theory and socio-ecological model (Figure 3) are added to the syndemic theory to help detail the relationships of the psychosocial health problems to HIV/STI risk. The ecosocial theory serves as the overarching philosophy which organizes the AFI actress syndemic and eases the understanding of psychosocial health problems' proximity to HIV/STI risk.

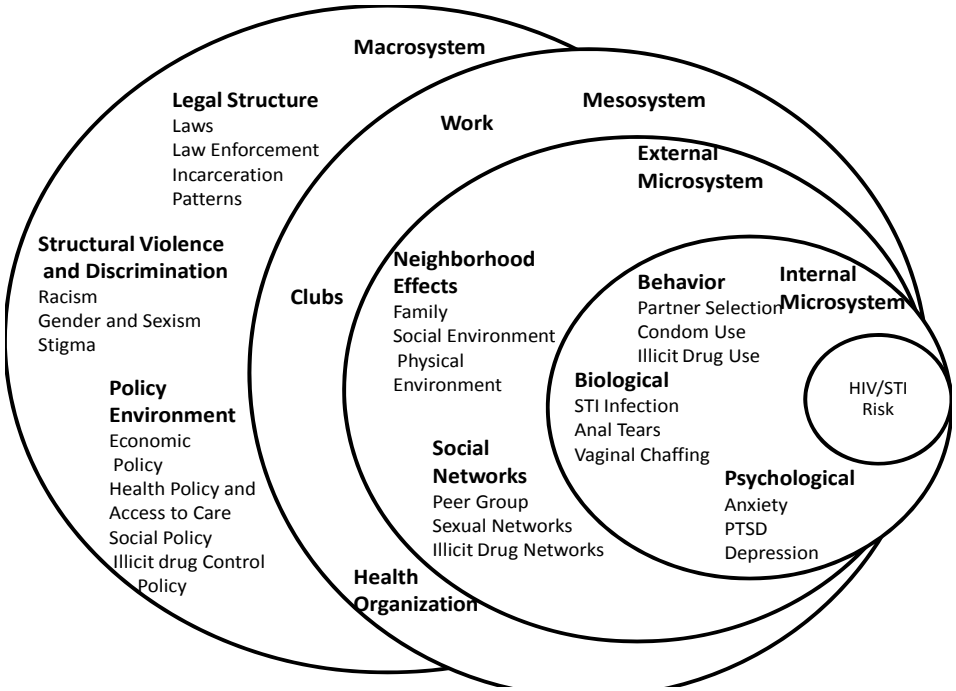

Figure 3 Ecosocial Perspective and Socioecological Model of HIV/STI Risk among AFI actresses. This figure illustrates the multilevel risk experienced by AFI actresses. Adapted from "The Social Epidemiology of Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome" by K.E. Poundstone. S.A. Strathdee, and D.D. Celentano, 2004, *Epidemiologic Review*,26, p. 24)

Figure 3 illustrates the elements of ecosocial theory including structural violence and discrimination in the macrosystem, through the use socio-ecological model as an organizing tool. The socio- ecological portion of the model above acknowledges the proximal to distal continuum of HIV/STI risk among AFI actresses. The integration of ecosocial theory and the socio- ecological model will be referred to as the ecosocial model from henceforth. Although the syndemic theory is a powerful framework that explains the interplay between "two or more afflictions, interacting synergistically" to enhance HIV/STI risk among females in the AFI, the new theory has limitations (CDC, 2008). Numerous studies have merely utilized syndemics as a lens of analysis to highlight

the interrelation between two or three seemingly singular epidemics without acknowledging the proximity of psychosocial problems to HIV/STI risk (Collins et al., 2005; Johnson et al., 2003; Romero-Daza et al., 2003; Singer et al., 2006). In an effort to alleviate this previously stated limitation, the combined socio-ecological and ecosocial perspectives (Figure 3) are integrated into the syndemic definition to take into account the "proximal –distal continuum" that different epidemics exert on the individual (Newcomb et al, 2003 p 220). The ecosocial portion of the newly integrated conceptual framework acknowledges the multiple levels of risk in the syndemic system while the syndemic portion of the framework acknowledges the interplay between the levels. The expansion of the syndemic theory also eases the observation of the interplay between micro, meso, macro systems of risk. The domains included in the theoretical framework include macrosystems (i.e., the most distal systems of influence including larger social and structural components of a culture), mesosystem (i.e., medial issues in which individuals are directly involved, including organizations), external microsystems (i.e. proximal relationships that proximally influence risk), and internal microsystems (i.e. individual domains that are most proximal to risk) (Newcomb et al, 2003 p 254). The ecosocial model goes beyond the traditional socio- ecological approach to account for different levels of risk that exert influence on an individual and discusses how an individual embodies risk in daily life. In other words, the ecosocial perspective merges the examination of political- economic determinants of health "which help establish and perpetuate inequalities in HIV/AIDS risk among population") with the biological and epidemiological contexts to understand "how factors at multiple levels from the microscopic to the societal contribute to the population patterns "of HIV/STI risk

(Poundstone et al., 2004 p 23). In addition, the ecosocial model deconstructs how individuals grapple with multiple dimensions of risk in their everyday lives and considers pathways of embodiment (the translation of social suffering into biological disease) (Krieger, 2008). The purpose of the integration of the ecosocial model and syndemic theory into one theoretical framework is to clearly explain the daily consequences of the syndemic in the lives of women in the AFI. The traditional (SAVA) syndemic highlights the nature of these relationships and illustrates that these risk systems do "not operate in isolation, but rather interact with one another and compound one another's effects" and the addition of the ecosocial model clearly locates the concurrent epidemics of the syndemic (Pantin et al, 2004 p 546).

The internal microsystem (see Table 1) is the most proximal influence on HIV/STI risk and consists of behavioral, biological, and psychological constructs. More specifically, salient internal microsystem components including mental illness, substance abuse use, and physical and emotional trauma will be emphasized. The table below also details important components in the external microsystem (sex acts with colleagues), mesosystem(relationships between agents) and macrosystem(legal structure). Table 1 below specifies biological, social and behavioral factors that perpetuate HIV/STI risk for AFI actresses.

Table 1

Ecosocial Model of HIV risk among Women in the Adult Film Industry

Internal Microsystem	• Behavioral: Low self –reported HIV/STI susceptibility, belief that the industry is safe • Biological: Current STI infections, increase susceptibility to HIV • Psychological: Post traumatic stress , Depression, Anxiety, Bipoloar Disorder • Biological: More fragile vaginal environment • Biological: Anal Tears • Biological: Chemical Burns from constant use of sex toys (Grudzen, 2008;Singer, 2006)
External Microsystem	• Immersion in adult industry social networks, leaving behind other supportive family and friends outside the industry • Agents control over AFI actresses: coercion of AFI actresses into increasingly more extreme sex acts to increase economic benefit • Sex acts with colleagues • Retrogressive Dynamic (Grudzen,2008)
Mesosystem	• Adult Industry Healthcare
Macrosystem	• NIOSH Recommendations (Legal Structure) • Los Angeles Health Department Recommendations (Legal Structure) • No laws enforce condom use or protection of workers (Legal Structure) (Kerndt,2005; Poundstone et al, 2004) • Structural Violence: It is economically advantageous to not use condoms (Grudzen,2008) • Structural Violence :Relationships among production companies and agents (occupational) promote the idea of not using condoms and this without concern of actor's risk for STI which may increase susceptibility to HIV (Grudzen, 2008)

Internal Microsystem.

The internal microsystem (Table 1) has the most proximal influence on HIV/STI risk and consists of behavior, biological, and psychological constructs. Other constructs at the intrapersonal level include mental health issues, drug use, and physical and emotional trauma. The previous pathways bear very striking similarities to the findings of Romero-Daza et al (2005) regarding substance abuse among street prostitutes. According to Grudzen et al (2008) and this study's pilot project (Sibley et al.,2008) detail that the plethora of mental health problems reported by AFI performers, especially actresses, are often a result of their time spent in the industry. The connection between recurrent STI infections and subsequent increased HIV/STI risk seems to be limited, or at the very least down-played, while other health risks associated with physical trauma tend to be overemphasized in AFI studies (Sibley et al, 2008). Grudzen et al. (2008) found substance abuse and mental health problems to be prevalent among performers, especially females. Substance abuse was reported to be quite common among female performers, with three pathways to substance abuse being identified: 1) performers who got into the industry because of a drug habit they already had; 2) performers who developed a drug habit in the industry as a result of their social networks; and 3) performers who used drugs in order to cope with stress, stigma, and emotional trauma resulting from involvement in the industry (Grudzen et al, 2008 p 73).Mental health issues may likely serve to further fuel substance abuse among performers. Prevalent mental health problems among females in the AFI include post-traumatic stress disorder, bipolar disorder, depression, and even suicide (Grudzen et al 2008). One performer expressed, "they try and break you and get you to the point where you just don't care and

you'll just do whatever" (female performer, Grudzen et al., 2008). The theme of "breaking" female performers is of particular importance in understanding female health risks in the adult film industry. Both Grudzen et al's study and the pilot study (Sibley et al.,2008)discuss how AFI actresses being broken may increase HIV/STI risk because many "broken" females have this "I'll do whatever" mentality and may be more likely to get involved in more risky acts with less regard for their well-being.

Male actors in the business are also at increased risk for HIV because of their use of Cavarject, a drug that facilitates penile erection. The drug is introduced into the body through injection into the shaft of the penis. The use of this drug significantly increases the risk for HIV infection because one has an opening at the injection site, and overuse may cause bleeding at the tip of the penis (Grudzen, 2008). The use of Cavarject may further compromise actresses' immunity because the break in the skin at the injection site augments the male actor's risk of HIV/STI risk, and the possible bleeding at the tip of the penis enhances the female's risk of exposure to two bodily fluids (blood and semen) (Grudzen et al., 2008; Stall et al., 2008).

External Microsystem.

The external microsystem goes beyond the individual level of HIV/STI risk and emphasizes the understanding of how the social contexts of people's lives influence their health (Newcomb et al, 2003). For example, many AFI performers long term familial or social relationships are broken or become strained due to their participation in the industry and the attached stigma (Grudzen et al, 2009). As a result, these performers form new social connections with peers in the industry, and these new relationships work to shape their new social environment and situation. Interestingly, the individuals in the

social networks of the adult film actresses may have a significant influence on decision making about HIV/STI risk behaviors among this population (Kawachi, 2001). Salient findings from Grudzen et al. (2008) indicate that relationships often disintegrate due actresses' participation in the AFI (Grudzen et al.,2008). New friendships are formed with AFI actresses, directors, and producers and these new relationships may lead to decreased separation between work and personal life, and subsequent increased alienation from old friends and family (Grudzen et al., 2008). This alienation may increase AFI actresses' dependence on their agents and colleagues for social support in addition to business management (Grudzen et al., 2008). Relationships between agents and women in the industry may heighten HIV/STI risk, as managers may coerce the adult film actresses into performing in increasing more extreme movies involving double penetration and rough anal sex, both very high risk acts, to increase revenue. The agents may also coerce these women to have sex (often unprotected) with their friends or producers (Grudzen, 2008; Sibley et al, 2009).

Another significant determinant in the external microsystem involves the actual sexual intercourse that occurs on set. Unprotected sex directly increases the AFI actresses' HIV/STI risk. More specifically, direct contact of skin to skin or mucous membranes heightens risk for Syphilis, Herpes (HSV), and Human Papilloma Virus (HPV) (which may cause genital warts as well as cervical cancer in women) (Kerdnt, 2005). Other high risk activities that enhance HIV/STI risk include the "growing use of internal ejaculation with vaginal and anal sex, pervasive use of unprotected anal sex, some use of double-vaginal and double-anal sex, sharing of sex toys, and oral-anal contact" (Kerdnt, 2005). According to producer and distributors, proliferation of internal

ejaculation during double penetration (one penis in the vagina and another penis in the anus)double- vaginal (two pensises in the vagina), and double anal (two penises in the anus) sexual acts are driven by consumer demand (Kerdnt, 2005; Grudzen et al., 2009).

Mesosystem.

This portion of the ecosocial perspective model emphasizes the influence of health organizations on the lives of AFI actresses (see Table 3). The Adult Industry Healthcare (organization which performed the bulk of testing among adult film actresses) has been integral in incorporating the innovation of monthly testing into the organizational culture of the Adult Film Industry. The Adult Industry Healthcare Clinic was initiated by a former adult-film actress turned doctor who received her PhD in sexology, Sharon Mitchell. The organization was tailored specifically to health needs of adult-film actresses and provided testing and counseling services. The website for the organization is quite informative including videos and recommendations on being as successful and as healthy as possible in the AFI. The website also provided information on STIs and HIV, and employed other individuals who were previous participants in the industry. Their services included provision of condoms, testing and treatment for other sexually transmitted diseases, pap smears, psychiatric assessment, drug and alcohol counseling, cosmetic surgery information, chiropractic healing and support groups such as a Relationships Group, Abuse Survivors Group, AFI actresses, and other special educational workshops (AIM, 2008). AIM also offered chemical dependency counseling and recommend blood tests for: HIV (by PCR DNA), syphilis (an "RPR" test), urine testing for Gonorrhea (by ultra-sensitive DNA amplification) and Chlamydia (by ultra-

sensitive DNA amplification), viewing a "PORN 101" video, which was available to take home and is also displayed in a condensed version at AIM Healthcare, and genital exams (AIM, 2008). This organization emphasized testing and treatment, but lacked comprehensive information on prevention of STIs. Actresses in the preliminary ethnographic pilot study discussed gaps in the HIV/STI prevention efforts of the AFI, and noted that they believed that AIM placed the interest of the AFI above ensuring the protection of the actresses. Additionally, AFI actresses from the pilot study also noted that AIM failed to provide information on the safer sex practices that worked within the current no condom practices of the heterosexual industry. AIM's failure to provide pertinent information on safer sex practices outside of the world of condoms may increase HIV/STI risk among AFI actresses.

Macrosystem.

The macrosystem of the ecosocial perspective plays a pivotal role in the HIV/STI risk syndemic among AFI actresses. This portion of the theoretical framework discusses how larger scale forces including structural violence and legal structure may influence AFI actresses' HIV/STI risk (Poundstone et al., 2004). The health determinants in the macrosystem include issues of social class, health policy, legal structure, and economics. The adult industry is its own culture and encompasses social structural, political and economic influences on health (Coriel, 2009 p 15). Both economic and social class drive the AFI and work together to increase HIV/STI risk in the industry. For example, the class system in the AFI was highlighted in previous ethnographic work with AFI actresses (Sibley et al.,2008). In the AFI class system, distributors hold the most power

due to their dominant influence on the price and quantity of the producers and actors (Sibley et al, 2008). The promotion of this ideology increases risk and illustrates how the community that has power (distributors) affects the less powerful community of actors and producers. Rather than suffer the wrath of losing their livelihoods, actresses continue to not use condoms and accept that STIs are merely an occupational hazard. The class system in the industry places women at greater risk because the power brokers (distributors and producers) compensate these women through higher monetary payment for performing riskier sexual acts on camera. Thus, the economic structure of the business perpetuates these women's participation in riskier acts which place women at a particularly heightened risk for HIV/STIs (Grudzen, 2008).

Structural violence refers to the large scale effects of social inequality which are "embedded in social structures" and work to increase the production of social suffering among marginalized populations. Social inequity is also a risk factor which enhances HIV/STI risk among AFI actresses. The "large scale forces" term mentioned above references structural violence's constraining effect on entire communities rather than individuals. In other words, structural violence is the collective influence of large scale hegemony and asymmetric power distribution in the AFI. Structural violence in the industry can also be further described as the powerful (producers and distributors) in the AFI imposing their dominance to ensure that condoms are not used on AFI sets. Another integral component of structural violence includes how large scale social inequality constrains the AFI actresses' access to political and economic resources in the industry and reinforces the power structure depicted in Figure 2 (Singer, 2009 p 140). It is also important to note that structural violence in the AFI is covert and currently legal.

Moreover, structural violence also refers to the mechanism through which producers and distributors increase the extreme nature of scene type in the community of AFI actresses and continue to increase profit.

Legal structure is another critical component of the macrosystem. The HIV outbreak of 2004, which left four individuals infected with HIV, prompted the Los Angeles Health Department to investigate health and safety in the industry and consequently set forth recommendations to decrease HIV/STI risk in the AFI. The investigation enforced Cal- OSHA's blood borne pathogens mandate that focused on employer's duty to provide protection against blood borne pathogens including blood, semen and vaginal fluids to all employees (Grudzen & Kerdnt, 2007). The HIV/STI Division of the Department of Health has been working to set the agenda for both AIM and the AFI to acknowledge "organizational problems" of infections that are not being caught through existing systems (Glanz et al 2002, p 316). The Los Angeles Health Department is working to restructure the policy of monthly testing to include encouraging performers to memorize the "five bodily fluids that transmit HIV," promoting use of the female condom, and avoiding ejaculation into a body cavity (including the mouth) (Kerdnt, 2005). The recommendation for decreasing STI rates in the AFI would also include the use of a condom for non-oral intercourse after "initial penetration ("dipping"), no ejaculation on mucosal surfaces, liberal use of lubricant to prevent vaginal or anal tearing, and vaccinations for performers for Hepatitis A Virus (HAV) and Hepatitis B Virus HBV (Kerdnt, 2005). The new policy should also include mandatory use of herpes-suppressing medications, twice monthly HIV testing using the

most sensitive methods available, and monthly testing for Gonorrhea, Chlamydia, and Syphilis (Kerndt, 2005).

The National Institute of Occupational Health and Safety (NIOSH) also made recommendations to decrease HIV/STI risk in the business: 1) averting riskier sexual behavior involving multiple partners, 2) ejaculating outside the partner's body and away from the mucous membrane area, 3) promoting the requirement of use of barriers, which protect the partner from contact with semen, vaginal fluids, mucous membranes, fecal material, etc., 4) making condoms and lubricant available at no cost to employees and without fear of reprisal or penalty, and 5) increasing opportunities for workers to participate in occupational decision-making and enabling the workers to report health and safety issues without fear of reprisal (Kerndt, 2005). Unfortunately, safer sex practices which would increase safety in the AFI may threaten one of its pillars: money. Producers and distributors suggest that condoms in adult film may decrease AFI profit, which communicates the principles of cultural logic (series of ideas and social norms on which the organization functions) that have been a formidable barrier in adoption of condom use in the heterosexual industry(Goldstein et al.,2011;Klausner & Katz,2011) . Furthermore, powerful individuals (distributors and producers) in the industry detest condom use because they believe that condom use will disrupt the fantasy portrayed in adult films that consumers demand and that this, in turn, will consequently disrupt the flow of economic capital from future adult films (Glanz et al, 2002 p 318; Padilla, 2008). More times than not advocacy of condom use comes with a substantial amount of occupational risk, because the individuals with the least amount of power (actors/actresses) must risk their ability to work in the AFI to advocate for condom use.

The figure below shows important policy landmarks which influence the AFI. The most critical policies in the figure include the 1988 California v Freeman policy because it signaled a significant increase in production of adult film in the state (De Cesare, 2005). The last two bullets of the figure denote the recent efforts by Cal-OSHA to decrease HIV/STI risk in the AFI population by meeting with actors, academics, physicians, and AFI distributors to determine the language of the new addition to the Cal- OSHA blood borne pathogen regulations specifically aimed at decreasing HIV/STI risk in the AFI(Cal-OSHA,2011).

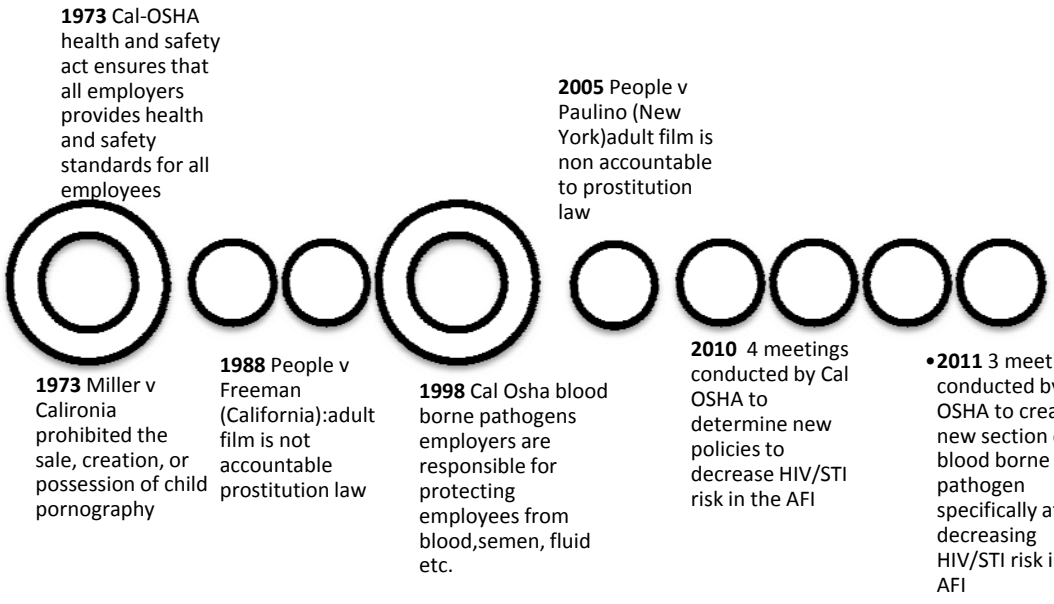

Figure 4. Timeline of Important Occupational Policies for AFI actresses. Modified from " Bloodborne Pathogens in the Adult Film Industry Cal/OSHA Advisory Meeting Minutes June 29, 2010" Chairs D. Gold and P.Riley, 2011,Cal-OSHA, p.3.

This macrosystem component of the ecosocial model is important because it exhibits how policy including Cal-OSHA's creation of laws may decrease HIV/STI risk among AFI actresses in the future (Cal OSHA, 2011). The figure above describes important policies that should influence AFI occupational health and a safety. Macrolevel components (lack enforcement on condom use) can work in tandem with microlevel factors (biological vulnerability of the vagina) to increase HIV/STI risk (Glanz, 2005). The model demonstrates that ecosocial levels are not separate, but instead, are intertwined and work together to heighten STI rates in the adult film industry. Moreover, the examination of all levels of the ecosocial model is a critical addition to syndemic theory because it provides information on the proximity of ecosocial levels to AFI actresses' HIV/STI risk The complex and multifaceted issues of HIV/STI risk among this population is best described by the combination of the ecosocial model and syndemic theory.

Applying the expanded Syndemic Framework to AFI Actresses.

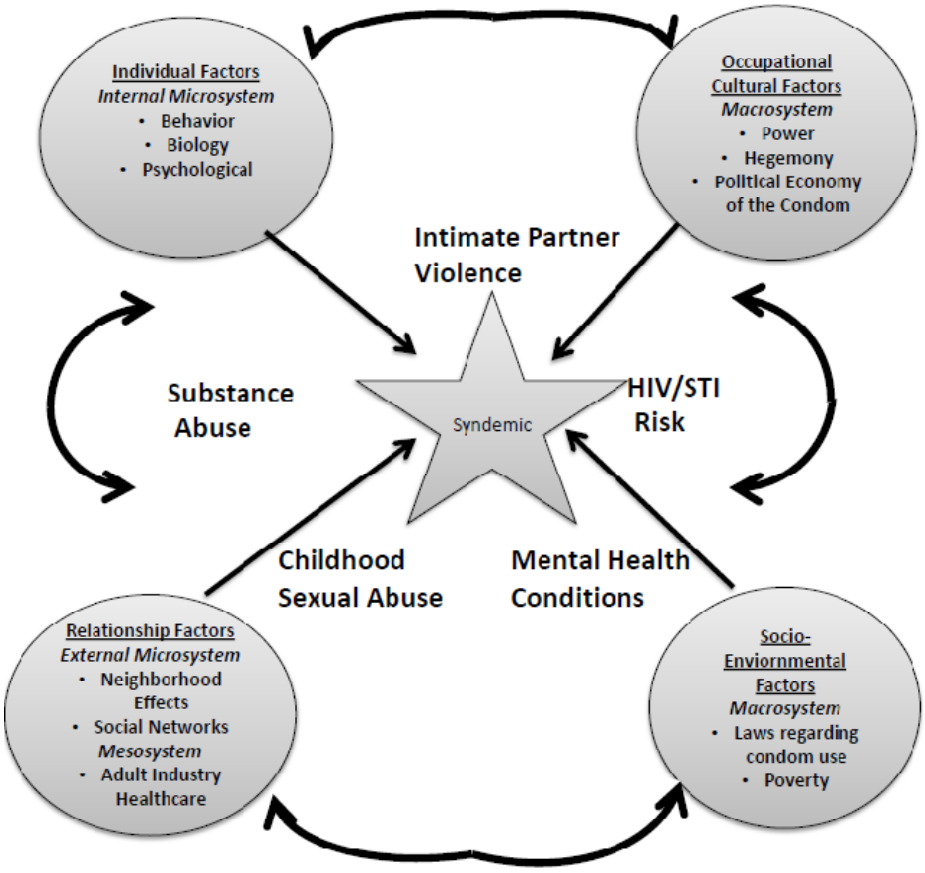

Figure 5. The Expanded Syndemic Model of Childhood Sexual Abuse, HIV/STI risk, Mental Health Conditions and Substance Abuse issues among AFI actresses.Adapted from "A Syndemic Model of Substance Abuse, Intimate Partner Violence, HIV Infection and Mental Health Among Hispanics" by R.M. Gonzalez-Guarda, A.Florom-Smith, and T.Thomas, *Public Health Nursing*,28,4, p 3.

Figure 5 illustrates how the intersection of psychosocial health problems forms the AFI actress syndemic. The figure above represents the expanded syndemic approach (integration of ecosocial model and syndemic theory) that will inform the analysis of data in this inquiry. The connection between the psychosocial health problems is symbolized by the star in the center of the figure. The circles at each edge of figure represent the levels of the ecosocial model and depict how "risk or protective factors" constrain or

perpetuate HIV/STI risk. The addition of the occupational cultural factors in the figure above emphasizes the importance of the role of cultural factors in the HIV/STI disparity of AFI actresses. The addition of these occupational cultural factors account for the ability of participation in the AFI to enhance the occurrence of HIV/STI risk behaviors among actresses when compared to their non-AFI counterparts (Gonzalez-Guarda et al., 2011 p 2). Moreover the occupational cultural circle also allows for this inquiry to acknowledge the heterogeneity of actresses' participation of HIV/STI risk behaviors. In other words, the theoretical framework allows for differences the embodiment of HIV/STI risk behaviors in the everyday lives of AFI actresses and works against the idea that all AFI actresses participate in HIV/STI behaviors at the same rate (Gonzalez-Guarda et al., 2011). The arrows in the figure above represent the interplay and feedback between ecosocial levels of influence and the AFI actress syndemic (Gonzalez-Guarda et al., 2011 p 2, 3).The expanded syndemic approach is particularly well suited for this research because of the complexity of heightened STI rates and HIV outbreaks in the AFI.

The framework is formulated on the understanding that HIV/STI risk is "a dynamic social process that unfolds within a specific sociocultural context" (Padilla et al., 2008p 381 sic.). It is also important to acknowledge that the sociocultural context facilitates the AFI actress syndemic (synergistic system of psychosocial health problems working to enhance HIV/STI risk). The framework also allows for the "contextualized understanding of how experiences of stigma and social inequality shape sexual risk and social inequality" among AFI actresses (Padilla et al 2008 p 386 sic.).

Syndemic theory also underscores the importance of the "analysis of adverse disease interactions, including their causes and consequences for human life and well-being."(Singer, 2009 p 95). The theoretical framework emphasizes how the two or more psychosocial health problems work together to create a greater increase in HIV/STI vulnerability than the sum of each psychosocial problem working alone (Singer, 2009 p 28). Syndemics occur when adverse social issues, including stress or social marginalization, perpetuate the asymmetric burden of disease in a specific population (i.e. adult-film actors/actresses). Moreover, the theory emphasizes the confluence of interactions between psychosocial health problems and social conditions additively increase HIV/STI risk among AFI actresses (Meyer et al., 2011; Singer, 2009)

The collective use of the ecosocial model and syndemic theory provides the opportunity to view the HIV/STI risk environment of adult film actors and actresses "as a product of interplay in which social and structural factors intermingle and political economic factors play a predominant role" (Rhodes et al, 2005 p 1026 sic.). The strength of syndemic theory lies in the theory's examination of the interconnections and interplay between social, behavioral and biological factors, although one weakness is that it does not discuss the degree to which HIV/STI risk factors contribute to the syndemic (Meyer et al., 2011; Singer, 2009). While the ecosocial theory acknowledges the different systems of HIV/STI risk, syndemic theory provide commentary on the relationships between the ecosocial levels. The integration of the ecosocial and syndemic perspectives provides the ability to gauge the force of each ecosocial level on HIV/STI risk. From henceforth, the combination of the ecosocial perspective and syndemics will be referred to as either the *expanded syndemic perspective* or *syndemics*.

The use of the expanded syndemic perspective emphasizes how political-economic factors work to limit an individual's autonomy in regard to occupation and health (Sibley, 2009). While the ecosocial perspective organizes the multifaceted aspects of HIV/STI risk in the adult film community, syndemics explains the interplay between substance abuse, violence, and HIV/AIDS. It is equally important to conceptualize the psychosocial problems (Substance Abuse, Partner Violence, Childhood Sexual Abuse, and Depression) of the adult-film actress syndemic interrelated epidemics that work in proxy to augment HIV/STI risk among this population. Syndemics also underscores the "important interactions among co- morbid diseases" (Singer et al, 2006 p 2011 sic., Stall et al.,2003; Mustanski et al.,2007; Senn et al.,2010). The conceptual framework acknowledges that adverse social conditions (e.g. poverty, stigmatization, oppressive social relationships) often perpetuate the disproportionate rates of disease among oppressed, disenfranchised groups (Singer et al 2006 p 2011; Sibley, 2009). The expanded syndemic perspective explains how "social forces" (retrogressive dynamic, hegemony and lack of occupational opportunity) also contribute to amplified HIV/STI risk (Sibley, 2009; Singer, 2009 p 140).

The combination of expanded syndemic perspective allows one to understand that STI/HIV risk among AFI actresses is neither accidental nor random, but is instead enhanced by the interaction of internal microsystem factors (biological vulnerability and drug use), external microsystem factors (childhood sexual abuse and intimate partner violence), mesolevel factors (political economy of condoms), and macro level factors (lack of enforcement of laws to protect women as employees).

Chapter Three

Methods

Introduction

This content of this chapter describes the role of qualitative and quantitative methodologies and analytic procedures, and explains how both methodological strands are integrated. This study utilized a mixed methods transformative explanatory a sequential methodology (a type of mixed methods design which emphasizes power imbalances and develops results to improve quality of life of study participants) to explore the socio-cultural, biological and psychological issues that may amplify HIV/STI risk among adult film actresses. Quantitative and qualitative data were integrated to understand the components of the syndemic among adult-film actresses and the process that facilitates the enhancement of HIV/STI risk in this marginalized population.

The research design emphasizes equivalent weighting of both quantitative and qualitative strands of the study, with the quantitative portion occurring before the qualitative portion (QUAN → QUAL) (Hylok, 2011 p 35). The methodology permits the use of the qualitative data to further explain the processes that facilitate the possible syndemic among adult film actresses. The research design integrates both strands of research in the interpretation/analysis phase of the research to gain a comprehensive picture of how both strands combine to explain HIV/STI risk among AFI actresses (Creswell & Plano Clark, 2011; Hylok, 2011).

The design's emphasis on power imbalances makes it well suited to frame the quantitative and qualitative aspects of the complex interactions of syndemic theory Moreover this design also allows the qualitative results to corroborate and extend quantitative findings. (Hylok, 2011 p 35). The examination of the previously mentioned power imbalances will allow this study to advance social justice initiatives to move toward improving the quality of life for marginalized individuals in AFI (Creswell & Plano Clark, 2011). This chapter will describe the methods used in Phase I (quantitative logistic regression) and Phase II (ethnographic interviews) to study HIV/STI risk among AFI actresses. This study aims to explore the how the synergism between psychosocial health problems additively amplify HIV/STI risk.

Figure 6 provides a visual diagram of how the methods and procedures will explore the previous questions and hypotheses (outlined in Chapter 1) and how they are tied to the theoretical framework of the thesis.

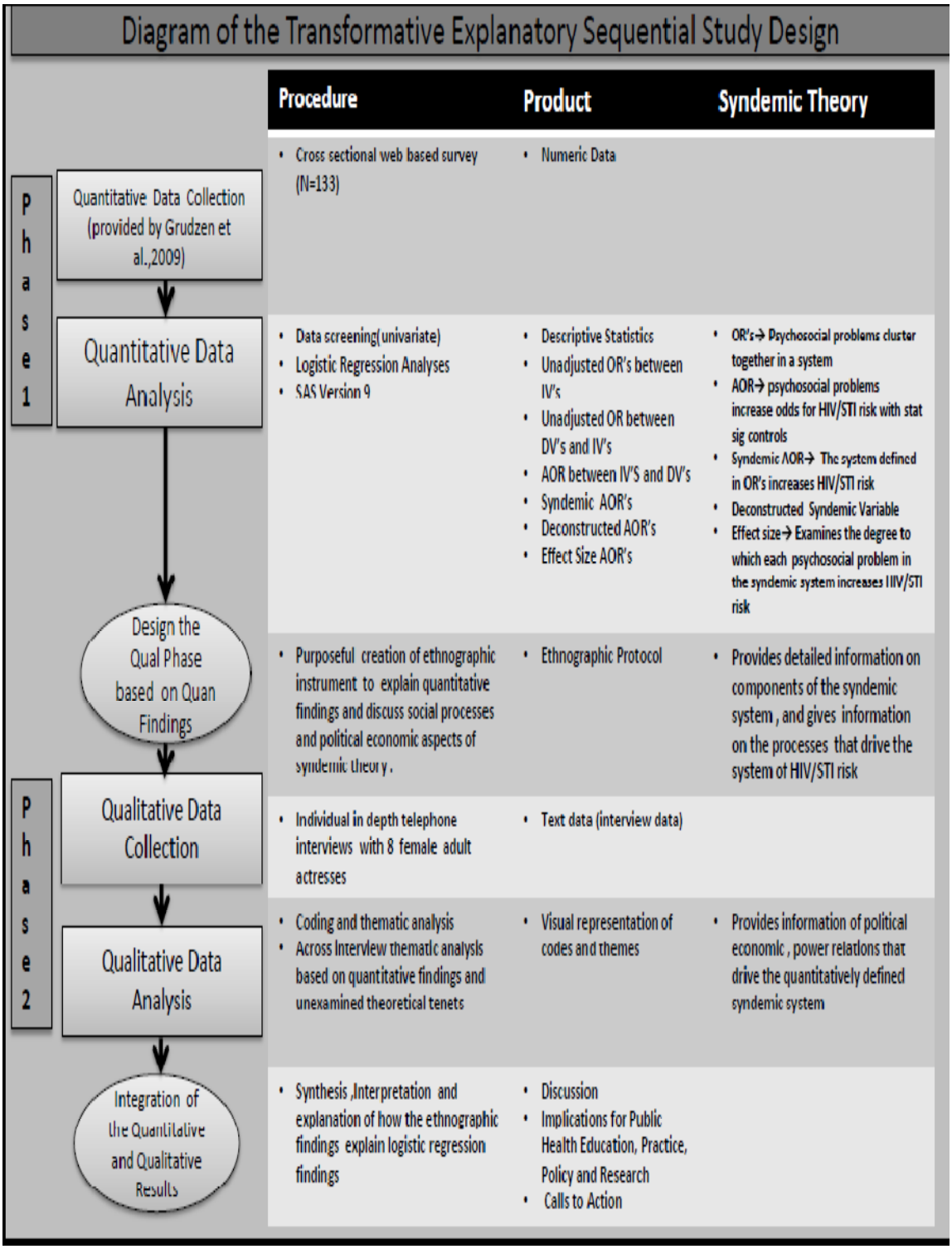

Figure 6. Diagram of the Mixed Methods Research Design. Adapted from "Designing and Conducting Mixed Methods Research" by J.W. Cresswell, and V.L. Plano-Clark, 2011, Sage Publications, p 121, and M.J.Hylok, 2011, Exploring Student Perceptions to Explain the Relationship between Physical Activity and Academic Achievement in Adolescents: A Mixed Methods Study Digital Commons at University of Nebraska, p 36.

Research Design

Quantitative secondary data analysis (multivariate logistic regression) was performed before the qualitative data collection. One of the key features of the transformative design is to allow the quantitative findings to inform the qualitative portion of the study, thus permitting the qualitative results to explain and elaborate on key quantitative findings. In this study, salient findings from the quantitative phase shaped the creation of the ethnographic instrument. A critical aspect of this transformative inquiry is its emphasis on mixing quantitative and qualitative methodologies to explore how inequalities among AFI actresses perpetuate HIV/STI risk. The research design also calls for the researcher to acknowledge the ability of AFI actresses to resist complex, negative forces HIV/STI risk. Although the majority of the research questions are risk centric and negative, this study incorporates inquiries into how these women utilize their agency to survive and negotiate the myriad of issues in the AFI in phase 2.Lastly, both research methods and the conceptual framework view HIV/STI risk as situated in a cultural context. Lastly, results were collected to fuel change that will hopefully improve the quality of life for AFI actresses (Creswell, & Plano Clark, 2011 p 9).

One of the challenges or limitations to this design includes a lack of guidance in the transformative mixed methods literature on how to apply the design type. The researcher used the methods in previous syndemic literature to supplement any gaps in the mixed methods literature for this study (Creswell & Plano Clark, 2011 p 99). The quantitative portion examined the association between psychosocial health problems and HIV/STI risk; the qualitative portion of the study provided data on quantitatively

unexplored factors which also perpetuate HIV/STI risk among AFI actresses. The data were merged through comparison and contrasting after completion of each analysis for each methodological strand. The mixed methods study design allowed the researcher to link the qualitative exploration of the dynamics of multifaceted socio cultural context while examining the quantitative relationships which may magnify HIV/STI risk in this population (Padilla et al, 2008 p 381). Further, using both methods in tandem provided greater validity than using a monomethod (solely quantitative or qualitative) study design. Mixed methods allowed both types of data to be triangulated and "mutually corroborated" (Bryman, 2006 p 106).

Phase I. Secondary Quantitative Data Analysis

Participants and Primary Data Procedures.

The data utilized for the quantitative secondary analysis portion of this mixed method study were obtained from Dr. Corita Grudzen at the University of California at Los Angeles. Grudzen and colleagues conducted a study from August through December 2009. The premise of the primary study was to understand differences in the domains of mental health, physical health, socio-economic status, substance abuse, and partner violence between adult film performers and a *normative* (non- adult film actress) population. The primary data for this study were collected over the internet from August through December 2009. The participants for the primary data were recruited from a pool of 1040 "unique female performer emails" found on the Internet Film Database (n=192) , and the website www.sexyjobs.com (n=848) (Grudzen et al, 2010). The primary data research team emailed the initial recruitment email every 14 days until they

achieved the goal sample size of 134 participants. The participants of the study received a fifty dollar online gift card as incentive for participation (Grudzen et al, 2010 p 5).

When participants opened the email they were provided with a link to the survey. After the participant took the survey, the research team was able to download the responses from the online database. Confidentiality was maintained because there was no way to link the participants' responses to their email address. Inclusion criteria included female individuals who were listed in the Internet Film Database six months prior to the data collection, and were over seventeen years of age. A total of 166 responses were received from the original pool of 1040 unique email addresses. Of these respondents, 32 were excluded from the primary data analysis because they completed the survey in less than four minutes (three seconds per question) and the majority of their responses lacked any variability. The final sample size was 134 (Grudzen et al, 2010 p 5,6).

The mean age of the online sample was 27.8, with a range between 18-40 years. All the individuals in the study performed in adult films in the past 6 months and spent a mean time of 3.6 years working in the AFI (Grudzen et al, 2011 p 640). The purpose of this primary data collection was to compare the health status of the sample of female performers (N=134) to a larger sample of normative women (N=1,773) retrieved from the 2007 California Women's Health Survey (CHWS) (mean age 31.3) (Grudzen et al 2010, p 2).

Description of the use of the Primary Data Collection Instrument.

The structured online survey included seventy-eight items. The majority (66) of items were taken directly from the CHWS; the other twelve items came from an earlier pilot project conducted by the primary data research team and the Los Angeles County Health

Survey (Grudzen et al, 2010, p 6). Salient issues elucidated in the literature (Grudzen et al.,2008; Stall et al.,2003) and qualitative pilot project (Sibley et al.,2008) drove the selection of both independent and dependent variables in phase I. The items from the pilot project were included to obtain data on issues relevant to increasing HIV/STI risk among AFI actresses (see Table Appendix B for more information).

Characteristics of Female Adult Performer Sample and Normative Sample.

The majority of both the adult female performer (73 %) and normative (81.9 %) samples were white. A greater proportion of the adult film sample self-reported their race as black (18.3 %) than their normative counterparts (7 %) (Grudzen,2010 p 19). In terms of ethnicity, the normative sample was composed of more Hispanic individuals (51.3 %) than the adult film sample (14.2 %) (Grudzen, 2010 p 19). Interestingly, individuals in the adult performer sample were 11.7 % more likely to have higher educational status (attended college) than their normative counterparts. AFI actresses were also both more likely (45.8 % vs. 39.8 %) to have an annual income over $25,000 and to be living in poverty (50 % vs. 36.3 %) as compared to other Californian women (Grudzen, 2010 p 19).

A significant amount of the adult performer sample experienced higher rates of adulthood forced sex (26.7 % vs. 8.5 %), childhood sexual abuse (37.2 % vs. 13.0 %) and, domestic violence in the past year (34.3 % vs. 6.4 %) than the normative sample. Adult performers also had higher rates of alcohol use (74.4 % vs. 43.9 %), and were more likely to have had a larger number of "drinks per occasion" in the past month (2.4 % vs. 1.9 %) and to report more days that they "drank more than 4 drinks in the past month"

(3.3 vs. 2.2) than the participants in the California Women's Health survey. Adult-film performers were also more likely to engage in daily tobacco use (27.5 % vs. 5.5 %), and less likely to have health insurance (50.8 % vs. 74.4 %).

Rationale for Secondary Data Analysis and Logistic Regression Analyses. Although Grudzen et al. (2010) explore multiple health domains for adult film actresses and present a strong case for disproportionately high rates of depression and physical health profiles as compared to their peers, the researchers fail to utilize theory to explain why these adverse health effects exist and do not provide information on the co-morbidity of these variables. The primary data analysis provides information that indicates that women in the AFI in this sample suffer from a disproportionate rate of negative health effects, but the authors fail to provide information on what occurs if a female in the adult film industry has multiple health issues. The secondary data analysis undertaken in this thesis inquires as to whether multiple negative psychosocial health problems (a syndemic) produce more severe adverse health outcomes than one problem. Multivariate logistic regression is used to test the syndemic theory. As noted previously, syndemic theory posits that risk behaviors (partner violence, substance abuse, childhood sexual abuse and psychological distress) work in tandem as a synergistic system that "additively magnifies" HIV/STI risk among AFI actresses(Stall et al.,2003 p 941).

Multivariate logistic regression is a suitable method to elucidate the dynamic synergistic nature of the AFI actress syndemic for the following reasons. First, multiple studies utilize logistic regression to explore the possibility of a syndemic in marginalized populations similar to AFI actresses (Stall et al.,2003; Mustanski et al.,2003; Senn et

al.,2010). Second, the dichotomous nature of the dependent variables in logistic regression eases the understanding that statistically significant results translate into AFI actresses' having increased vulnerability to HIV/STI risk. Moreover, statistically significant results mean that actresses who report a greater number of psychosocial problems are at increased odds of the selected dependent variables (i.e. HIV/STI risk indicators). Third, previous quantitative syndemic studies use logistic regression to test the syndemic theory with marginalized which allows the current study to easily contribute to syndemics and HIV/STI literature. Lastly, examining the association between the independent variables (psychosocial health problems) and dependent variables (HIV/STI risk indicators) at both bivariate (Chi Square tests) and multivariate levels (Logistic Regression) provides information on the possibility of a syndemic among AFI actresses. The use of this particular statistical analysis provides a strong basis for exploring the tenets of syndemic theory (Singer, 2009; Romero Daza et al, 2005; & Romero Daza et al, 2003).

The definition and rationale for the variables used in phase I of the study are as follows.

Demographic (Control) Variables.

All participants were female (per inclusion criteria). Other demographic information included in the study were: educational level (coded 0 for less than high school and 1 high school or greater), level of income (coded 0 for ≤$ 25,000 a year and 1 > $25,000 a year), employment status (coded as 0 for unemployed and 1 for employed) race and ethnicity (coded as 1 for white, 2 for black and 3 for other race/ethnicity such as Asian or Hawaiian Pacific) and sexual orientation (coded as 1 for Heterosexual, 2 for

homosexual and 3 for Bisexual) (Senn et al.,2010 p 3; Grudzen et al.,2010). The coding schema for demographic variables was informed by previously quantitative studies use of similar demographic variables (Mustanski et al., 2007; Senn et al., 2010; Stall et al., 2003).

Predictors.

All predictors were selected because previous syndemic studies on marginalized populations utilized the following variables and found that they are interrelated and work in tandem form a syndemic that additively and synergistically increased odds for HIV/STI risk (Stall et al., 2003; Mustanski et al.,2007; Senn et al.,2011). These predictors are:

(1) Childhood Sexual Abuse (CSA)

Childhood Sexual Abuse is defined as unwanted sexual activity before 18. This variable measured forced sex before 18 (childhood sexual abuse, dichotomous -- Yes coded 1 or No coded 0) (Grudzen et al., 2010; Senn et al., 2010).

(2) Adult Sexual Abuse (ASA)

Adult Sexual Abuse is defined as unwanted sexual activity after 18 in this sample. The variable measured forced sex after 18 (Yes coded for 1 or No coded for 0). This variable was only examined on the bivariate level through raw and adjusted odds ratios because the variable showed no significance with any outcome variables; consequently, the adult sexual abuse variable was not considered as a part of the theoretical syndemic variable.

(3) Intimate Partner Violence (IPV)

This variable was initially constructed with six dichotomous items, including asking the woman if her partner had: a) thrown something at her b) pushed, grabbed, shoved or slapped her, c) kicked, bit, or hit her with fist, d) beaten up or choked her, e) forced her to have sex, and f) threatened/used a knife or gun. Due to a large Pearson product Moment Correlation Coefficient (PMCC) value (over .95 with other items in the IPV variable), the item that measured whether a participant was hit was removed to prevent multicolinearity issues in future logistic regression models (Grudzen et al., 2010). The final IPV variable included five dichotomous indicators.

(4) Substance Abuse

Separate indicators of the substance abuse variable were examined on the bivariate level to ascertain unadjusted odds ratios. Bivariate analyses allowed for a deeper understanding of how different types of substance abuse are related to HIV/STI risk before combining the indicators to create the composite substance abuse variable. For example, a question on the survey asked individuals if they used: a) Marijuana, b) Cocaine, c) Methamphetamines, or d) Needles in the past year (Yes was coded 1 and 0 was coded No). Binge drinking was a continuous variable that measured how many times in the past month an individual participated in binge drinking behavior (4 or more drinks in a sitting). The majority (62 %) of individuals answered the binge drinking item with the response of consuming 4 or more drinks 1 or 2 times in the past month; consequently, this continuous item was dichotomized so that a number greater than or

equal to 1 was coded as 1 and anything that equaled 0 or missing was coded as 0. Separate components (binge drinking, marijuana, cocaine, methamphetamine, and needles) of the substance abuse variable were examined individually on the bivariate level. Correlations between substance abuse indicators and multicolinerity concerns were examined through the SAS programs PROC CORR procedure; any variables with r a PMCC over .95 would have been eliminated. No substance abuse indicators had PMCC values higher than .95, and consequently all substance abuse components were used in the composite substance abuse variable in multivariate analyses (Mustanski et al., 2007; Stall et al., 2003).

(5) Depression Score

The Depression score was based on the Patient Health Questionnaire eight-item depression scale (PHQ-8), which was utilized to evaluate the frequency and "severity" of depression in the AFI female sample (Kroneke et al., 2009 p 165; Simoni et al., 2010). Individuals were asked how many days in the past fourteen they had: a) felt little interest in doing things, b) felt down, depressed, or hopeless, c) had sleeping problems (difficulty falling asleep, too much sleep),d) felt tired or had little energy, e) had poor appetite/ate too much, f) felt bad about self/ failure, g) had trouble concentrating, and h) felt slow or fidgety (Kroenke et al., 2009). The Depression score was composed of eight 14-point indicators which were coded 0 if the participants indicated that they experienced the indicator "0 to 1 day," coded 1 for "2 to 6 days", coded 2 for "7 to 11 days" and coded 3 for "12 to 14 days" (Kroenke et al., 2009 p 165). Each of the eight indicators was coded with previously determined schema that allowed for a maximum Depression score

ranging from 20-24, which indicates severe depression (Kroneke et al., 2009 p 165). Congruent with studies that have utilized the PHQ-8 scale, a score equal to or greater than 10 was coded as 1 (indication of depression) and any score less than 10 was coded as 0 (Kroneke et al., 2009 p 165; Simoni et al., 2010).

(6) Syndemic Theory Testing Variable

Similar to previous studies (Stall et al., 2003; Mustanski et al., 2007; Senn et al., 2010) each psychosocial issue (Childhood Sexual Abuse, Intimate Partner Violence, Substance Abuse, and Depression) was coded as either 0 or 1, and then the scores for all of the psychosocial problems were summed to construct the syndemic score. More specifically, if an individual reported any single substance abuse component (binge drinking, marijuana use, cocaine use, etc.), they were coded as 1 for the substance abuse domain. In regard to Intimate Partner Violence, if an individual indicated any single indicator of partner violence, they were also coded as 1. Therefore, an individual who ,for example, reported an experience of Childhood Sexual Abuse, at least one indicator of Intimate Partner Violence, one indicator of Substance Abuse, and a score equal to or greater than 10 on the Depression scale, would be recorded as having a syndemic score of 4 (Mustanski et al.,2007; Senn et al.,2010; Stall,2003).

Outcome Variables.

Cultural factors are important links between syndemic conditions (Gonzalez-Guarda et al., 2011 p 7). The selected outcome variables reflect the most relevant variables to the HIV/STI risk in the adult film occupation. The selection of outcome variables in this research are based on the HIV/STI risk variable in previous syndemic

studies and tailored to the unique aspects of the everyday lives of AFI women. Similar to Senn et al. the number of sex partners was utilized as the dependent variable (personal sex number) (2010). Self-reported HIV risk was examined through gauging if an AFI actresses' perception of her HIV risk increases the likelihood of higher syndemic scores. Lastly, AFI actresses often participate in other sex work, including escorting and stripping to supplement their income, and consequently, their participation in sex work other than adult film was examined as the last dependent variable (Grudzen et al., 2008). The combination of these variables is meant to examine multiple culturally relevant aspects of HIV/STI risk in this population. The dependent variables are as follows.

(1)Self-reported HIV Risk

This ordinal survey item asked participants if they felt they were at risk for HIV (5 point Likert scale- ranging from strongly agree to strongly disagree). This item measures individuals' self -reported perceived susceptibility to HIV. Individuals, who strongly agreed, agreed or were neutral were coded as 0, while those who selected disagree, or strongly disagree were coded as 1. Noel-Thomas (2010) notes that individuals may fall along a gamut of perceived HIV susceptibility, individuals who strongly agree or agree that they are at risk for HIV are considered low-risk while individuals who disagreed that they were at risk for HIV were considered high-risk (Noel-Thomas, 2010 p 48). Additional research has shown that individuals who have a low self -reported perceived susceptibility for HIV may be more likely to participate in risky behaviors and less likely to engage in preventative behaviors (Noel-Thomas, 2010; Safren et al., 2011).

(2)Personal Sex Number

This continuous survey item asked participants to enter the number of male sexual partners in their personal life in the last twelve months. This dependent variable mirrors Senn et al's use of the number of personal sexual partners variable to measure of HIV/STI risk (Senn et al.,2010). The mean of 4 partners was utilized to dichotomize this variable, consequently, individuals who entered 4 or more partners were coded as 1 and individuals who selected less than 4 partners were coded as 0.

(3) Other Sex Work

This variable came from the survey item "Other than adult film, have you traded sex for money, drugs, food, or a place to stay, lifetime (Y/N)." It was dichotomized so that Yes was coded as 1 because it represents increased HIV/STI risk and No was coded as 0 because it indicated low or no HIV/STI risk (Grudzen et al., 2010). This question indicates increased HIV/STI risk because preliminary qualitative work indicates that AFI women who have financial or substance abuse issues often diversify their sex work portfolio by escorting to supplement their income. Additionally, minimal condom use on set often translates into other sex work, which consequently indicates increased HIV/STI risk (Grudzen et al, 2009; Grudzen et al., 2010).

Analytic Procedure

Description and Rationale for Construction of Logistic Regression Models.

The table below serves two purposes: it links the syndemic tenets to the statistical procedure and presents the expected outcome and product of each statistical procedure.

The last column describes how some variables were removed as the quantitative procedures continued due to lack of statistically significant results. Removed variables were also used to increase parsimony of logistic regression model that followed the bivariate analysis of independent and dependent variables.

Table 2

Tenets of the AFI actress syndemic by analytic procedure and connection to syndemic theory

Hypothesis (Tenets)	Statistical Procedure	Purpose	Expected Outcome	Product	Removed Variables*
1. The psychosocial problems (depression, childhood sexual abuse, intimate partner violence, substance abuse) are closely associated with each other	Chi Square Test with Mantel Haenszel Odds Ratio	Examines the relationships between IV's to understand how they relate to each other	Numerous statistically significant bivariate odds ratios, to confirm the components of the syndemic system for this population	Unadjusted Odds Ratios	
2.The psychosocial problems are positively and significantly related to the outcome variables	PROC Logistic with statistically significant controls	Logistic regression models for each DV separately with IV's to assess the relationship between each separate IV (syndemic component) with DV's and statistically significant controls	Statistically significant relationships between IV's and DV's to show which DV's to advance to Multivariate models and which IV's are relevant to the syndemic for each DV	Unadjusted Odds Ratios Adjusted Odds Ratios	Adult Sexual Abuse
3.The psychosocial problems work synergistically in a system, consequently when psychosocial problems are combined into a scored	PROC Logistic with syndemic scored variable (ranges from 0-4) with DV	Examines the relationship between the syndemic system defined in tenet 2 and DV's and IV→ scored syndemic variable and statistically significant variable	Positively statistically significant odds ratios with a number of DV's which suggest an additive relationship between the syndemic variable and DV's	Adjusted Odds Ratios (With Statistically Significant controls)	

variable (0-4) and will positively and significantly relate to outcome variables					
4. With the addition of each psychosocial problem, the odds of each outcome variable will increase (i.e. odds for syndemic 3 will be lower than odds for syndemic 4 on any given outcome variables).	PROC Logistic DV's with syndemic 2 ,syndemic 3, syndemic 4 as IV's and stat sig controls	Examine the relationship between the deconstructed syndemic variable and the DV's	Ascending Statistically significant odds ratio from syndemic 2 to syndemic 3 to syndemic 4		
5. All psychosocial problems do not share equal importance with each dependent variable. Some psychosocial problems amplify odds of HIV/STI risk more than others	PROC Logistic DV's and each IV entered in to each model	Examine the importance of each component of the syndemic with each DV	Positive Statistically Significant relationships with relevant variables for each DV	Adjusted Odds Ratios(With Statistically Significant controls	

SAS (9.2) was utilized to conduct a series of Chi Square tests and three types of logistic regression models, with the purpose of examining tenets of syndemic theory. Psychosocial problems were included in models if there was a statistically significant positive relationship between the dependent variables and psychosocial health problems (independent variables) (Stall et al., 2003; Mustanski et al., 2007; Senn et al., 2010). Tenet 1(Table 4) listed in the table above was assessed through bivariate analysis, which was performed using a series of Chi-square tests with the Mantel-Haenszel adjustment to

understand if independent variables were interrelated. If the unadjusted Odds Ratios are significant and positively correlated this indicates that psychosocial problems (independent variables) are closely associated and form a syndemic system. The analyses performed for Tenet 1 also allowed for the elimination of any possible extraneous independent variables which were not significantly associated with other independent variables and did not belong to the syndemic system

The second tenet (Tables 5, 6, and 7)was assessed through logistic regression analyses that inspected the associations between the independent variables and the dependent variables through both bivariate and multivariate analyses to explore whether the independent variables are interrelated and also are significantly and positively associated with the dependent variables. The control variables for the multivariate analyses were determined through using the Mantel-Haenszel Chi Square analyses, all findings are reported in Table 3B in Appendix B. The findings in table 3B examine the relationship between each independent variable and control (age, education, income, poverty, and race). The two following criteria were utilized to select which control variables would be included in the multivariate logistic regression analyses listed in Tables 5-10:1) if a p-value of $p<.25$ resulted, and 2) if the variable was of theoretical importance (i.e. indication of poverty, inequity and/or social marginalization) then the control variable was included in the multivariate model (Hosner & Lemeshow,2000) The unconventional p-value of $p<.25$ was selected to ensure that no theoretically important variables were excluded from the multivariate models (Hosmer & Lemeshow,2000 p 97). These logistic regression analyses also assessed whether the independent variables which were shown to be related to each other (statistically significant) in tenet 1, are positively

correlated with the dependent variables. Adult sexual abuse showed no statistically significant relationship with any dependent variables and was consequently eliminated from future analyses to ensure model parsimony for analyses that followed

The third tenet (Table 8) utilized logistic regression to determine if the psychosocial problems work synergistically in the predetermined syndemic system through running logistic regression models that input the scored syndemic variable as the independent variable in separate models with each dependent variable. Statistically significant odds ratios provide information on how much the odds increase with the addition of each psychosocial health problem (Mustanski et al., 2007). The fourth tenet (Table 9) deconstructs the syndemic variable to examine if the odds ratios of the dependent variable ascend with the addition of each psychosocial problem. For instance, it is expected that when compared to the referent group (syndemic 0 and syndemic 1), odds will have a positive statistically significant increase from syndemic 2 to syndemic 3 to syndemic 4 (i.e. respondents with syndemic 4 will have the highest odds of the dependent variables).The last (fifth) type of logistic regression model (Table 10) examines the practical importance of each psychosocial problem with each dependent variable (Mustanski et al., 2007 p 42).

Phase II. Ethnography

Salient findings from the logistic regression analyses provide information on the influence of psychosocial health problems (internal and external microsystem factors) on HIV/STI risk, but fail to provide a complete picture of how the mesosystem and macrosystem factors facilitate the AFI actress syndemic. The limitations of phase I prompted the addition of an ethnographic phase to this inquiry. The inclusion of

ethnography to the quantitative strand affords the researcher the ability to gain a deeper understanding of the quantitative findings on the internal and external microsystems, meso and macrosystem of theoretical framework. Moreover, the qualitative research allows the researcher to move past individualized risk to address the culturally specific "vectors of disadvantage" to understand how the political - economic context and hegemony perpetuate HIV/STI risk (Ozcwark, 2007 p 1). Furthermore, ethnography offers information on how the embodiment of psychosocial problems and structural violence may facilitate the AFI actress syndemic . Finally, the addition of ethnography will contextualize and extend salient quantitative findings (Singer, 2009).

Rationale for adding Ethnography.

The addition of ethnography to the quantitative phase will allow the researcher to understand the additional dimensions of HIV/STI risk among AFI actresses. Previous ethnographic work (Grudzen et al, 2009 & Sibley et al, 2008) discussed how individuals used drugs to cope with work in the AFI. This methodology will allow deeper understanding of the relationship between systems of power and oppression and decreased condom use. Furthermore, ethnography will also clarify how inequality may work to inhibit these women's agency to engage in protective behaviors. This portion of the study will also provide the opportunity for a more comprehensive investigation of issues highlighted in the researcher's preliminary work that defy quantitative methods of inquiry including, the possible role between preparation rituals (douching and drugs) and how these rituals might enhance HIV/STI risk. Lastly, the addition of ethnography to logistic regression provided the platform to understand how and why disease

discriminates in the AFI, and women continue to have the highest rates of STIs in the industry (CDC, 2008).

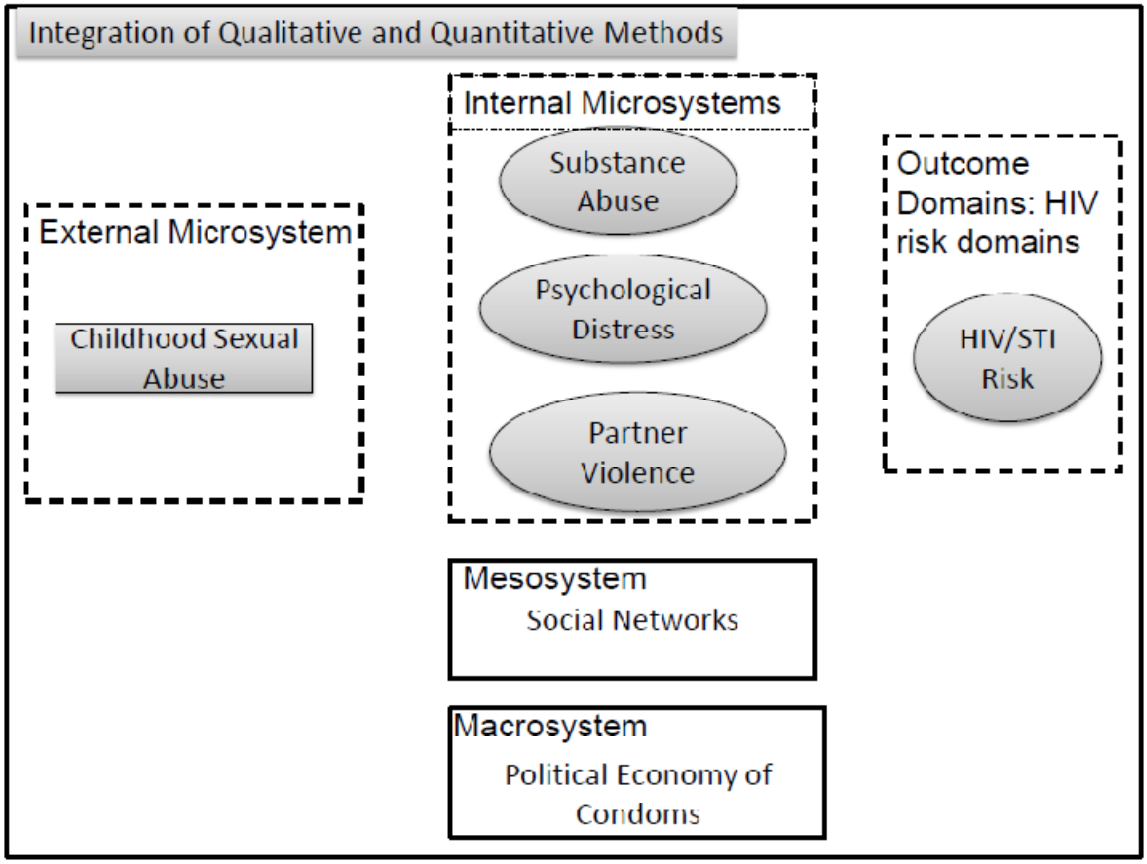

Figure 7. Integration of Quantitative and Qualitative Methodologies

Recruitment and Challenges to Research.

Participants for the in-depth interviews were recruited through physical sites (a Florida based HIV/STI testing service and a non- profit in Los Angeles) and websites Twitter, Facebook, MySpace, and YouTube) which provided services to AFI actresses. A physical flyer (see Appendix D) was emailed to the testing service and the non-profits. In the search for participants on YouTube, the researcher utilized the search terms "porn," "adult film industry," and "XXX actresses" to find profiles of adult film

actresses. This strand of recruitment yielded one participant for the study. In the search for participants on Twitter, the researcher also used search terms "XXX actress," "AFI actress," and "porn star" to find the initial pool of actresses, and then began to follow (mechanism of connecting to Twitter contacts) actresses who were also adult film actresses and friends of the initial pool of actresses. The researcher posted "tweets" (messages on Twitter) communicating interest in interviewing AFI actresses. The researcher also utilized the direct message tool in Twitter to communicate more detailed information about the study, answer any questions about the study, build rapport with possible participants and maintain confidentiality in all communication. Twitter yielded two participants for the study. The aforementioned search terms were also utilized on MySpace, YouTube and Facebook; the researcher used direct messaging to contact AFI actresses on both sites, and these websites yielded one participant each. The testing center in Florida yielded one participant, and the non-profit organization in California yielded three participants. Thus, the qualitative sample included a total eight AFI actresses in the United States.

Six of the eight participants in the study declined the $30 incentive. The two participants who received the incentive were compensated through Western Union and PayPal respectively.

Components of Ethnographic Design.

The ethnographic portion of the study consisted of an individual interview and online observation. Traditionally, ethnography also includes participant observation, but due to safety concerns the researcher was only able to perform online participant observations through Facebook, Twitter, Myspace, and You Tube. The online

observation included emphasis on understanding the activities of actresses, their social networks, and their mistrust for civilians (individuals who are not participants in the industry). From September, 2010 through April, 2011, the researcher observed all adult film actresses participating in this study by following them on Twitter, friending them on Facebook and MySpace, and subscribing to their You Tube accounts to gain a deeper understanding of the everyday occupational lives of female adult film stars.

The individual interview portion of this study emphasized the qualitative dimensions of the internal and external microsystem explored in the quantitative findings and understanding the meso and macro levels of risk among adult film actresses. For various reasons the goal of obtaining 20 participants was not met. Individuals who choose not to participate noted that they 1) did not trust the researcher due to her civilian(AFI outsider)status,2) wanted the researcher to reveal the identities of previously interviewed actresses, or 3) could not find time to do an interview. Although a number of qualitative studies on syndemics have utilized approximately twenty participants, eight participants were believed to be sufficient for the qualitative strand of this study because the findings were utilized to complement and enrich quantitative findings (Romero Daza et al, 2003; Singer et al, 2006; Mimiaga et al, 2009; & Gonzalez-Guarda et al, 2010).

All eight individual interviews occurred over the telephone. The researcher audio recorded and transcribed each individual interview, and notes were taken after each online observation. During the telephone interview, pauses, changes in voice tone and voice volume were systematically recorded to understand nonverbal cues that may have contributed to the overall meaning of the in- depth interviews. Perceptions of emotion during the phone interviews were also recorded to account for any researcher bias.

Description of the Qualitative Instrument.

The individual interview instrument consisted of four demographic questions and six open- ended questions (which included sub questions and probes). The first portion of the ethnographic instrument was meant to both substantiate and expand findings from the quantitative portion of the study while the second section of the instrument addressed portions of the theoretical framework (meso and macro systems) that could not be addressed in the quantitative portion (See Appendix C -Table 2C for the full instrument and connection of ethnographic items to conceptual framework.)

Qualitative Data Analysis.

The constant comparative method was utilized to examine phenomena within each individual interview and observations (Cresswell, 2009). For comparison within each individual interview, the researcher utilized an open coding technique to ask the following questions (taken directly from Boeije, 2002 p 396):

1. What is the core message of the interview?
2. How are different fragments related?
3. Is the interview consistent?
4. Are there contradictions?
5. What do fragments with the same code have in common?

The answer to question 5 determined the components of each code, and each code was carefully placed in the code book. A summary for each individual interview, which shows the codes in the particular interview, was documented. Additionally, each interview was color coded, with each color representing a specific code. The individual interviews

were also compared to each other and the following questions were asked (Boeije, 2002 p 396):

1. Is A talking about the same as B?
2. What do both interviews reveal about the category?
3. What combination of concept occurs?
4. What are the similarities and differences between interviews A, B, C?
5. What criteria underlie this comparison?

The previous procedures encouraged transparency and created a clear audit path which increased qualitative rigor because the codes can be easily traced back to the original codebook and original interview. In the individual interview, I utilized open coding followed by axial coding. The axial coding allowed the researcher to go beyond merely describing and grouping data, to search for associations between themes, and understand the themes in the occupational cultural context (Hoepfl, 1997).

Qualitative Rigor.

First, rigor in the qualitative data was insured by allowing one other researcher to apply codes to the data and compare notes. Rigor in the qualitative data was further upheld by employing specific methods of ensuring data were neutral, replicable, credible, and dependable, as confirmed by an external auditor (committee member Dr. Amina Alio). For example, neutrality was encouraged by allowing the research and external auditor to listen to the individual interviews and code them, and trace all codes in

qualitative data back to the original transcript (Goodman,Trainor, & Divorski, 2005 p 61). Replicability was encouraged in the data analysis plan by ensuring that there were clear paths between the "transcripts, codebook, and analysis notes" (Goodman, Trainor, & Divorski, 2005 p 62). Traceability was encouraged through clearly labeling transcript identifiers that were recorded after each code in the codebook. Credibility (qualitative research's equivalent to internal validity) or the idea that there was a consistency between "respondent's views and the researchers' representations of them" was encouraged through the comparison within the individual interview (Begley & Tobin, 2004 p 391). Dependability (the equivalent of reliability) was encouraged through providing the external auditor a clear path between transcripts, the codebook, and analysis. Confirmability (the equivalent of objectivity and neutrality) was fulfilled when the external auditor determined that the reported data and analysis were "clearly derived from the data" (Begley & Tobin, 2004 p 392).

Preliminary Limitations of Qualitative Research.

The major limitation of the ethnographic phase of this research is the purposive sampling technique which sacrifices the generalizability of random sampling. The insular nature of the population made purposive sampling in the qualitative portion of the study the most realistic choice. In short, I sacrificed generalizablity to gain rich insight into the HIV/STI risk behaviors that occur on set.

Mixed Methods Data Analysis

After both portions of the study were collected and analyzed, the findings were compared. The discussion section (Chapter 5) will be utilized to separately analyze salient quantitative and qualitative findings quantitative and qualitative strands. Both strands will be connected and concurrently examined in the integration of the data section of Chapter 5(Creswell, 2009 p 213). While logistic regression is a strong method for testing the syndemic theory, the addition of ethnography provides the integrated understanding of "the structure in social life and the explanation for the processes that fuel the associations discovered" in the logistic regression models (Bryman, 2006 p 33). The mixed methods data convergence will also discuss how the qualitative themes corroborate and extend important quantitative findings (Bryman, 2006; Cresswell & Plano- Clark, 2011).

Ethical Concerns.

Potential ethical considerations have been considered in every stage of this thesis. For example, even in the identification of the research problem, ethics were considered in terms of ensuring that no research questions further "marginalized or disempowered" the AFI actresses (Creswell, 2009 p 88). Each component of both the qualitative research questions and quantitative hypotheses were integral because of their potential to decrease the health disparity of heightened STI rates among this population and empower this population by entering their voices into the scholarly discourse. In terms of data collection, the researcher ensured that the primary quantitative data team went through the proper Institutional Review Board channels at the University of California at Los

Angeles, and provided a certificate of approval for the secondary analysis of received data from the University of South Florida to the primary investigator, Dr. Corita Grudzen, before receiving any quantitative data. The USF IRB application detailing the ethnographic portion of this study was approved and addressed potential ethical concerns and participant risks involved in this research (See Appendix D). In the qualitative data collection process, the researcher balanced the need for gaining pertinent information with paying as careful attention to the participant's mental state as possible. The researcher took the "Do no harm" principle that is listed in many codes of ethics very seriously, and consequently did not deceive the participants on the purpose of the study. Participation in the study was entirely voluntary, and participants were informed of their right to decline or withdraw participation at any time. The USF IRB approved a waiver of signed informed consent because the signed form would be the only information linking participant's real name to the study; accordingly, an emailed version of the consent form (See Appendix D) was sent to each participant prior to the interviews. The researcher provided time for the participants to voice questions or concerns about the study before each interview. All recordings and notes were kept in a secured environment (a password protected laptop) to prevent compromised confidentiality. Furthermore, a pseudonym was provided for all participants to ensure confidentiality.

Ethics during the data analysis and interpretation were upheld through ensuring that the utmost accuracy is maintained through a clear audit trail from the transcription to the data analysis to the final thesis (Creswell, 2009 p 91). Ethical considerations were also taken in the writing and dissemination of this research through the use of unbiased language and the researcher took a "proactive stance" to not falsify, suppress or invent

findings in this study (Creswell, 2009 p 92). Finally, all details of the study procedures were available to participants upon request so that the utmost credibility of the study was upheld (Creswell, 2009 p 92).

Chapter Four

Results

Phase I: Quantitative Findings

Chapter four consists of findings from both phases in the transformative explanatory sequential design. Phase I of the research design will explore the independent variables (depression, childhood sexual abuse, intimate partner violence, substance abuse) and their association with the dependent variables which indicate HIV/STI risk (perception of susceptibility to HIV risk, number of sexual partners in personal life and participation in other sex work). Phase I provides demographic information and quantitatively explores the previously stated hypotheses.

Demographics.

Table 3(below) presents demographic characteristics of the study sample used for the quantitative phase of this research. The mean age of the sample was 27.8 years. The sample was predominately white (73%), unmarried (81.4%), and under 30 years of age (33.3%). Almost three-fifths (58.3%) reported engaging in risky (anal, double penetration, group sex) sexual acts on camera and 75% reported substance abuse. The majority (60%) of the sample was college educated. Finally, half of the adult film actresses in this phase of the study indicated that they were living in poverty.

Table 3

Characteristics of Adult Performers 18-40 years old, Prevalence of HIV/STI indicators and psychosocial problems

Characteristics	**Adult Performers (N=134)**
Age, mean (SD)	27.8 (7.4)
18-29	33.3%(42)
30-39	22.2%(28)
≥40	7.94%(10)
Hispanic, %. (number)	14.2% (18)
Race/Ethnicity, %. (number)	
White	73%(84)
Black	18.3% (21)
Asian	3.5% (4)
Native Hawaiian/Pacific Islander	.8% (1)
American Indian/Alaska Native	4.6% (5)
Any College, %. (number)	60.9% (78)
Married, %. (number))	18.6%(25)
Annual Income, %. (number)	
<$25,000	51.50%(69)
> $**25,000**	48.5%(65)
Poverty*, No. (%)	50%(67)
Dependent Variables (Indicators of HIV/STI risk)	
More than 4 Personal Sex Number, No of male sexual partners in personal life in past 12 months	63(47.73)
Participation in Sex Work Other than Adult film for food, drugs or money in past months	54(40.91)
Believed themselves to be susceptible to HIV (HIV Risk) (%)	21(15.91)
Independent Variables (Psychosocial problems)	
Adult Sexual Abuse (Rape) . (%)	34 (26.7)
Childhood Sexual Abuse. (%)	48 (37.2)
Intimate Partner violence, prior 12 months, No. (%)**	46 (34.3)
Substance Abuse *(%)**	99(75 %)
Depression (%)	43(33 %)

Note. *Applied for food stamps, received public assistance, or not enough money to meet basic needs, prior 12 months. **Partner threatened safety, threw something, pushed, grabbed, shoved or slapped them, kicked, beat up, choked, forced sex and/or threatened with a knife/gun. ***Substance Abuse include individuals endorsing the use of at least one of the following in the past year [Binge Drinking(4 or more drinks);Cocaine; Marijuana; Needles;Methaphtemaines) +Missing data were excluded from the analysis. Adapted from C.R Grudzen, D.Meeker,J.M.Torres,Q.Du,S.Morrison,and R.M.Gelberg,2010,Manuscript Submitted for Publication, p15.

Descriptive Statistics

More than half of the sample (54.6%) indicated *never* experiencing child/adult sexual abuse, 25.8% reported experiencing either childhood or adult sexual abuse, and 18.2% reported experiencing *both* childhood and adult sexual abuse. With regard to depression, 32.6% yielded scores indicating depression. While almost three-quarters of the sample (73.5%) reported experiencing none of the indicators of intimate partner violence, 11.4% of the sample experienced one of the indicators, 6.1% experienced two of the indicators, 6.1% experienced three of the indicators, 0.76% experienced four of the indicators, and 2.3% of the sample reported all 5 of the intimate partner violence indicators.

Substance abuse appeared to be a considerable issue among this population. Although one-quarter of the sample reported no substance abuse, 28% reported the abuse of one substance, 21.2 % reported the abuse of two substances, 13.6 % indicated the abuse of three substances, 6.1% reported the abuse of four substances and 5.3 % indicated that they abused five substances. 33% of the sample reported PHQ-8 scores over ten and indicated experiencing depression. Fewer than 1 in 10 (8.3%) of the sample participants exhibited none of the aforementioned psychosocial problems (syndemic 0), 12.9% reported one of the problems (syndemic 1), 35.6% indicated two of the issues (syndemic 2), 28.0% reported three of the issues (syndemic 3), and 15.2% reported having experienced four of the psychosocial problems (syndemic 4).

Inferential Statistics

Hypothesis 1. The psychosocial problems (depression, childhood sexual abuse, intimate partner violence, substance abuse) are closely associated with eachother.

A large number of psychosocial health problems were found to be independently associated with each other. Individuals who reported using marijuana had greater odds of reporting cocaine (OR=9.85, 95% CI=2.1-44.33) and methamphetamine use (OR=3.5, 95%CI=1.09-11.18). Individuals who used cocaine in this sample had increased odds of reporting methamphetamine use (OR= 7.50, 95% CI= 2.54-22.12) and intimate partner violence OR=3.09, 95% CI =1.18-8.12). Individuals who engaged in methamphetamine use had greater odds of reporting needle use (OR=16.7, 95 CI% =3.74-75.19) and experiencing intimate partner violence (OR=6.6, 95% CI= 2.35-18.75). Participants who reported needle use had amplified odds of experiencing childhood sexual abuse (OR: 5.57, 95% CI =1.08-28.83). AFI actresses who reported intimate partner violence had an increased odds of depression (OR=5.11, 95% CI =2.24-11.69), childhood sexual abuse (OR=2.62, 95% CI 1.12-5.06), and adult sexual abuse (OR=4.22, 95% CI (1.81-9.84). AFI actresses who reported high depression scores had increased odds of childhood (OR=2.37, 95% CI= 1.12-5.06) and adult sexual abuse (OR: 2.62, 95% CI= 1.16-5.88). Lastly actresses who reported childhood abuse had augmented odds of experiencing adult sexual abuse (OR=7.0, 95%CI= 2.93-16.73). These findings are presented in Table 4 below.

Table 4

Relationships between Psychosocial Health Problems

Exposures	Binge Drinking	Mar[a]	Coc[b]	Meth	Need[c]	IPV	Dep[d]	CSA	ASA
Binge Drinking	---	------	------	------	------	-------	-------	-----	------
Mar[a]	OR:1.26 (.67-2.58)	---	----	---	----	-------	--------	-----	------
Coc[b]	OR:1.54 (.56-4.29)	OR:9.85 * (2.1-44.33)	---	-----	-----	--------	-------	------	------
Meth	OR:1.30 (.46-3.68)	OR:3.50 * (1.09-11.18)	OR:7.50 * (2.54-22.12)	------	-----	------	-------	--------	------
Need[c]	OR:2.12 (.42-10.64)	OR:1.64 (.39-6.87)	OR:1.55 (.29-8.03)	OR:16.77* (3.74-75.19)	------	------	-------	-----	------
IPV	OR:1.41 (.62-3.20)	OR:1.76 (.79 - 3.93)	OR:3.09 * (1.18-8.12)	OR:6.6 * (2.35-18.75)	OR:3.83 (.97-15.20)	------	-------	-------	------
Dep[d]	OR:1.21 (.73-1.99)	OR: 1.16 (.55-2.42)	OR:1.03 (.38-2.77)	OR:2.66 (.99-7.14)	OR:2.76 (.7025-10.87)	OR:5.11* (2.24-11.69)	------	-------	------
CSA	OR:1.04 (.49-2.19)	OR:1.15 (.56-2.36)	OR:2.08 (.81-5.32)	OR:2.68 (.99-7.22)	OR:5.57* (1.08-28.83)	OR:2.62* (1.18-5.81)	OR:2.37 * (1.12-5.06)	-------	------
ASA	OR:2.21 (.90-5.39)	OR:.60 (.27-1.33)	OR:2.46 (.93-6.51	OR:1.77 (.63-4.96)	OR:1.72 (.39-7.63)	OR:4.22* (1.81-9.84)	OR:2.62 * (1.16-5.88)	OR:7.0 * (2.93-16.73)	------

Note.The odds ratios reported above are unadjusted
*Indicates statistical significance
95 % Confidence Intervals that include one are not statistically significant
All p values are 2-tailed.
[a] Marijuana Use ,[b] Cocaine Use,[c] Needle Use,[d] Depression Score

Hypothesis 2. The psychosocial problems are positively and significantly related to the outcome variables (indicators of HIV/STI risk)

The unadjusted odds ratios (bivariate analysis) reported in the tables below were collected through using the Chi Square procedure and reporting the Mantel-Haenszel odds ratio and corresponding confidence intervals. Adjusted odd ratios (multivariate analysis) reported in the tables below were retrieved by controlling for statistically significant control variables and entering the psychosocial problem as the independent variables, and other sex work and personal sex number as dependent variables. It is important to note that separate logistic regression models were constructed for each dependent variable. The three tables below explore hypothesis 2.

Table 5

Relationships between Psychosocial Health Problems and Self-Reported HIV Risk

	Self-Reported HIV			
	Bivariate Analysis		Multivariate Analysis	
Predictors	OR 95%CI	p-value	AOR 95%CI	p-value
Binge Drinking	.60 (.24-1.53)	.28	.59 (.23-1.52)	.28
Income **Low Income** **High Income**			 .69 (.27-1.75) 1.00	 .43
Marijuana	2.24 (.81-6.20)	.12	2.27 (.81-6.34)	.12
Education **Did not Graduate High School** **Graduated High School**			 .92 (.35-2.45) 1.00	 .87
Cocaine	2.53 (.85-7.55)	.09	2.53 (.85-7.57)	.09
Education **Did not Graduate High School** **Graduated High School**			 .99 (.38-2.63) 1.00	 .99
Meth	1.00 (.26-3.71)	.98	.98 (.26-3.71)	.97
Education **Did not Graduate High School** **Graduated High School**			 1.04 (.40-2.71) 1.00	.94
Needles	1.55 (.30-8.03)	.60	1.47 (.27-8.01)	.65
Income **Low Income** **High Income**			 .69 (.26-1.83) 1.00	 .46
Race **White** **Black** **Other**			 1.00 .90 (.22-3.68) 1.66 (.51-5.36)	 .88 .39
Substance Abuse	2.22 (.61-8.09)	.22	2.31 (.61-8.80)	.22
Education **Did Not Graduate High School** **Graduated High School**			 .82 (.30-2.28) 1.00	 .71
Race **White** **Black**			 1.00 .94 (.24-3.71) 1.68	 .93 .39

	Self-Reported HIV			
	Bivariate Analysis		Multivariate Analysis	
Predictors	OR 95%CI	p-value	AOR 95%CI	p-value
Other			(.51-5.46)	
IPV	1.48 (.54-4.04)	.44	.77 (.27-2.21)	.44
Education **Did not Graduate High School** **Graduated High School**			.97 (.36-2.6) 1.00	.95
Depression	2.72* (1.05-7.02)	.04	2.69* (1.1-7.17)	.04
Poverty **Indicated Poverty** **Did not Indicate Poverty**			.96 (.35-2.65) 1.00	.94
Childhood Sexual Abuse	3.34* (1.27-8.81)	.01	3.18* (1.17-8.66)	.02
Age **Age 18-29** **Age 30-39** **Age 40 and over**			2.99 (..35-25.59) .5.98 (.65-54.69) 1.00	.32 .11
Poverty **Indicated Poverty** **Did not Indicate Poverty**			.91 (.32-2.57) 1.00	.86
Adult Sexual Abuse	1.19 (.72-5.14)	.19	1.51 (.53-4.30)	.57
Income **Low Income** **High Income**			.67 (.25-1.80) 1.00	.43
Age **Age 18-29** **Age 30-39** **Age 40 and over**			2.54 (.30-21.13) 5.50 (.60-50.39) 1.00	.39 .13

Note. Statistically significant control variables (education, income, poverty age) were chosen in they had a $p<.05$ on the bivariate level *****Indicates statistical significance Confidence Intervals that do not include one are statistically significant Poverty is indicated if a participant applied for food stamps, received public assistance, or did not have enough money to meet basic needs in the prior 12 months.

Salient findings from both the bivariate(OR) and multivariate analyses (AOR) reported in Table 5 include increased odds of reporting depression (OR=2.72,95% CI= 1.05-7.02);(AOR=2.69, 95% CI= 1.1-7.17) and childhood sexual abuse(OR=3.34,95% CI 1.27-8.81);(AOR=3.18,95% CI=1.17-8.66) for AFI actresses who reported low perceived susceptibility for HIV.

Table 6

Relationships between Psychosocial Health Problems and Number of Personal Sex Partners

	Having four or More Personal Sex Partners			
Predictors	Bivariate Analysis		Multivariate Analysis	
	OR 95% CI	p-value	Adjusted OR 95%CI	p-value
Binge Drinking	1.37 (.67-2.78)	.39	1.37 (.67-2.78)	.39
Income **Low Income** **High Income**			1.00 (.51-1.99) 1.00	.99
Marijuana	3.11* (1.51-6.41)	.002	3.25* (1.56-6.78)	.002
Education **Did not Graduate High School** **Graduated High School**			.77 (.36-1.62) 1.00	.48
Cocaine	3.23* (1.17-8.95)	.02	3.26* (1.17-9.04)	.02
Education **Did not Graduate High School** **Graduated High School**			.89 (.43-1.83) 1.00	.74
Meth	5.0* (1.56-16.02)	.004	5.0* (1.57-16.19)	.007
Education **Did not Graduate High School** **Graduated High School**			.88 (42-1.84) 1.00	.74
Needles	2.28 (.54-9.54)	.25	2.62 (.61-3.30)	.19
Income **Low Income** **High Income**			1.12 (.55-2.30) 1.00	.75
Race **White** **Black** **Other**			1.00 1.81 (.67-4.90) 1.28 (.49-3.29)	.25 .62
Substance Abuse	3.20* (1.35-7.58)	.01	3.63* (1.46-9.00)	.006
Education **Did Not Graduate High School**			.64 (.30-1.40)	.26

	Having four or More Personal Sex Partners			
Predictors	Bivariate Analysis		Multivariate Analysis	
	OR 95% CI	p-value	Adjusted OR 95%CI	p-value
Graduated High School			1.00	
Race				
White			1.00	
Black			1.6 (.59-4.38)	.35
Other			1.19 (.45-3.15)	.72
IPV	2.73* (1.22-6.12)	.01	2.92* (1.27-6.71)	.011
Education				
Did not Graduate High School			.76 (.36-1.62)	.48
Graduated High School			1.00	
Depression	1.41 (.68-2.92)	.36	1.23 (.58-2.63)	.59
Poverty				
Indicated Poverty			.56 (.27-1.20)	.14
Did not Indicate Poverty			1.00	
Childhood Sexual Abuse	2.17* (1.05-4.51)	.04	2.26* (1.06-4.82)	.04
Age				
Age 18-29			1.5 (.50-4.58)	.46
Age 30-39			.91 (.26-3.24)	.88
Age 40 and over			1.00	
Poverty				
Indicated Poverty			.52 (.24-1.13)	.09
Did not Indicate Poverty			1.00	
Adult Sexual Abuse	1.28 (.58-2.81)	.54	1.42 (.61-3.30)	.42
Income				
Low Income			.99 (.49-2.03)	.98
High Income			1.00	
Age				
Age 18-29			1.34 (.46-3.95)	.59
Age 30-39			.86 (.24-3.08)	.82
Age 40 and over			1.00	

Note. Statistically significant control variables (education, income, poverty age) were chosen if they had a p<.05 on the bivariate level *Indicates statistical significance Confidence Intervals that do not include one are statistically significant at p<.05 Poverty is indicated if a participant applied for food stamps, received public assistance, or did not have enough money to meet basic needs in the prior 12 months.

According the unadjusted odds ratios reported in the table above AFI actresses who reported drug use (marijuana, cocaine, and methamphetamines), experiencing childhood sexual abuse, or intimate partner violence had increased odds of having four or more male sexual partners in their personal lives in the past year. The adjusted odds ratios reported in the table above examined the relationships between the psychosocial health problems and increased number of male sex partners in the adult film actress's personal lives while controlling for statistically significant demographic variables. As displayed in Table 6, individuals who used marijuana had greater odds compared with non-marijuana users (AOR=3.25, 95 %CI=1.56-6.78) to have over four or more male sex partners in their personal life in the past year. Women who participated in cocaine use had increased odds of (AOR=3.26, 95% CI=1.17-9.04) reporting four or more of male sexual partner in their personal lives when controlling for educational level. Adult film actresses who used methamphetamines had augmented odds (AOR= 5, 95 % CI= 1.57-16.19) of having four or more male sexual partners in their personal lives than the referent group (non-methamphetamine users) while holding educational level constant. AFI actresses who reported any indicator of substance abuse (OR=3.20, 95% CI=1.35-7.58) ;(AOR=3.63, 95% CI= 1.46-9.00) were at increased odds of having four or more male partners in their personal lives while holding education and race constant. Participants in the study who experienced intimate partner violence (AOR=2.92, 95 % CI=1.27-6.71) had amplified odds of having four or more male partners in their personal lives (controlling for educational level). Adult film actresses who experienced childhood sexual abuse (AOR=2.36, 95 % CI=1.12-5.00) had increased odds of having four or more personal sex partners while holding ages 18-39 constant.

Table 7

Relationships between Psychosocial Health Problems and Number of Participation in Other Sex Work

	Other Sex Work			
	Bivariate Analysis		Multivariate Analysis	
Predictors	OR 95% CI	p-value	AOR (95%CI)	p-value
Binge Drinking (Income)	2.33* (1.09-4.95)	.03	2.36* (1.08-5.15)	.024
Income **Low Income** **High Income**			.34* (.16-.68) 1.00	.003
Marijuana	1.90 (.92-3.87)	.08	1.71 (.82-3.55)	.15
Education **Did not Graduate High School** **Graduated High School**			2.34* (1.2-4.88) 1.00	.02
Cocaine	4.55 (1.63-12.67)	.002	4.61* (1.62-13.13)	.04
Education **Did not Graduate High School** **Graduated High School**			2.53 (1.19-5.38) 1.00	.02
Meth	7.02* (2.18-22.60)	.0003	7.31* (2.22-24.14)	.001
Education **Did not Graduate High School** **Graduated High School**			2.61 (1.1-5.62) 1.00	.01
Needles	3.08	.11	4.17 (.95-18.47)	.06
Income **Low Income** **High Income**			1.00 (.99-1.01) 1.00	.49
Substance Abuse	3.36* (3.36-8.45)	.008	2.65 (.99-7.11)	.05
Education **Did Not Graduate High School** **Graduated from High School**			1.81 (.82-4.00) 1.00	.14
Race **White** **Black** **Other**			1.00 4.95* (1.77-13.86) 2.99 (1.10-7.66)	 .002 .320
IPV	2.10 (.96-4.60)	.06	1.77 (.79-4.00)	.16
Education **Did not Graduate High School** **Graduated High School**			2.31* (1.10-4.84) 1.00	.03

Depression	2.87* (1.36-6.09)	.005	2.81* (1.30-6.08)	.01
Poverty **Indicated Poverty** **Did not Indicate Poverty**			.91 (.42-1.98) 1.00	.009
Childhood Sexual Abuse	1.45 (.71-3.00)	.31	1.52 (.72-3.20)	.27
Age **Age 18-29** **Age 30-39** **Age 40 and over**			1.49 (.49-4.56) .89 (.25-3.24) 1.00	.48 .86
Poverty **Indicated Poverty** **Did not Indicate Poverty**			.72 (.34-1.53) 1.00	.39
Adult Sexual Abuse	1.81 (.82-4.00)	.14	2.15 (.92-5.02)	.79
Income **Low Income** **High Income**			1.00 (1.00-1.02) 1.00	.11
Age **Age 18-29** **Age 30-39** **Age 40 and over**			1.65 (.52-5.28) 87 (.22-3.42) 1.00	.40 .84

Note. Statistically significant control variables (education, income, poverty age) were chosen if they had a p<.05 on the bivariate level
*p< .05. All P values are 2-tailed
Confidence Intervals that do not include one are statistically significant
Poverty is indicated if a participant applied for food stamps, received public assistance, or did not have enough money to meet basic needs in the prior 12 months.

According to results from the bivariate analysis in the Table 7 above, participants who participated in binge drinking, cocaine, and methamphetamine use had increased odds of participating in sex work other than adult film. Depression is also significantly associated with participating in sex work other than adult film. The adjusted odds ratios (multivariate analysis) reported in the Table 7 above examined the relationship between psychosocial health problems and the dependent variable of participation in other sex work while controlling for statistically significant demographic variables. Binge Drinking (AOR=2.36,95%CI=1.08-5.15) holding low income constant, cocaine use (AOR=4.61, 95% CI=1.62-13.13) holding low educational level constant, methamphetamine use (AOR=7.31,95 % CI=2.22-24.14) holding low educational level constant, and depression (AOR= 2.81, 95% CI=1.30-6.08) holding indication of poverty constant all had positive and significant associations with increased odds of female adult film stars participating in sex work other than adult film.

Hypothesis 3. The psychosocial problem work synergistically in a system; consequently, when psychosocial problems are combined into a scored (0-4) syndemic variable, it will be positively and significantly related to the outcome variables.

Table 8

Logistic Regression to Evaluate the Association between Syndemic and HIV/STI Risk Indicators Holding Demographic Factors Constant

Predictors		**HIV Risk**			**Personal Sex Number**		**Other Sex Work**	
		OR	95%CI		OR	95%CI	OR	95% CI
Race								
White		1.00			1.00		1.00	
Black		.88	.22-3.55		3.95*	1.37-11.37	1.59	.57-4.43
Other		1.84	.55-6.20		2.58	.92-7.25	1.39	.51-3.78
Education								
Did not Graduate High School		.69	.25-1.96		1.64	.74-3.66	.58	.30-1.29
Graduated High School		1.00			1.00		1.00	
Poverty								
Indicated Poverty		.82	.30-2.23		.76	.33-1.72	.60	.27-1.30
Did Not Indicate Poverty		1.00			1.00		1.00	
Syndemic		1.62*	1.04-2.53		1.60*	1.14-2.24	1.65*	1.21-2.26

Note. *p < .05. All p values are 2-tailed
Confidence Intervals that do not include one are statistically significant
Syndemic=count of psychosocial health problems (range=0-4)
Black and Other represent racial categories
Poverty is indicated if a participant applied for food stamps, received public assistance, or did not have enough money to meet basic needs in the prior 12 months.
All models used education, race and poverty as controls

This set of logistic regression analyses reported in the Table 8 above examined the relationship between the syndemic variable (i.e. count of psychosocial health problems) and increased perceived susceptibility to HIV risk, other sex work, and personal sexual partners controlling for poverty, education and race (Mustanski et al., 2007 p 41). The syndemic score frequency yielded a finding of 8.3 % of the sample participants having none of the aforementioned psychosocial problems, 12.9 % who reported one of the problems, and 35.6 % who indicated two of the issues, 28.0 % who reported three of the issues, and 15.2% who reported having experienced four of the psychosocial problems. The syndemic variable was significantly associated with increased odds of four or more personal sex partners (AOR=1.65, 95% CI=1.21-2.26), participation in other sex work (AOR=1.60, 95% CI=1.14-2.24), low self-reported HIV risk (AOR=1.62, 95%CI=1.04-2.53).

Hypothesis 4.With the addition of each psychosocial problem, the odds of each outcome variable will increase (i.e. odds of syndemic 3 will be lower than odds of syndemic 4 on any give outcome variables).

Table 9

Number of Psychosocial Health Problems by HIV/STI risk indicators

Predictors	**HIV Risk**		**Personal Sex Number**		**Other Sex Work**	
	OR	95% CI	OR	95%CI	OR	95% CI
Race						
White	1.00		1.00		1.00	
Black	.94	.23-3.93	1.66	.58-4.73	3.93*	1.34-11.52
Other	1.94	.56-6.72	1.48	.53-4.09	2.72	.95-7.67
Education						
Did not Graduate High School	.65	.22-1.92	.57	.82-7.76	1.71	.76-3.87
Graduated High School	1.00		1.00		1.00	
Poverty						
Indicated Poverty	.82	.28-2.35	.52	.24-1.19	.66	.28-1.54
Did Not Indicate Poverty	1.00		1.00		1.00	
Syndemic 2	.74	.07-8.16	1.08	.64-5.10	3.73*	1.07-13.06
Syndemic 3	3.60	.37-35.18	2.53	.82-7.76	2.68	.70-10.25
Syndemic 4	5.27	.5-55.64	11.61*	2.74-49.24	10.66*	2.39-47.54

Note. *p < .05. All P values are 2-tailed
Confidence Intervals which do not include one are statistically significant
Syndemic 1= person with one psychosocial health problem;Syndemic 2= person with two psychosocial health problems;Syndemic 3= person with three psychosocial health problems;Syndemic 4= person with four psychosocial health problems
Black and Other represent racial categories
Poverty is indicated if a participant applied for food stamps, received public assistance, or did not have enough money to meet basic needs in the prior 12 months
Each model used race, education and poverty as controls

The logistic regression analyses displayed in the Table 9 above explored tenet 4 of syndemic theory that examines if psychosocial health problems intensify vulnerability self-reported HIV risk, personal sex partners, and participation in sex work other than adult film. If the presence of syndemics amplified the likelihood of the dependent variables, odds ratios for each count variable would be statistically significant and increase with each count. In this sample, both self -reported HIV risk and having four or more personal sex partners increased odds ratios for each level of the syndemic variable (syndemic 2, syndemic 3, syndemic 4) when compared to the referent group (combination of syndemic 0 and syndemic 1), but are not statistically significant due to the 95% Confidence Intervals including one. Only syndemic 4 is statistically significant with personal sex partners. Other sex work is the strongest outcome variable in regard to the expected outcome of ascending odds ratios with the addition of each psychosocial health problems. Logistic regression analyses with the other sex work variable yielded smaller odds for syndemic 3 than syndemic 2, which provides the opposite of the desired result of ascending positive significant odds ratios with the addition of each syndemic level. Interestingly, the analysis with the participation in other sex work variable did provide the expected result of statistically significant larger odds of syndemic 4 when compared to syndemic 2. The previously explored logistic regression analyses were important because they suggest an additive relationship with the syndemic and participation in other sex work because individuals who reported four psychosocial health problems had greater odds (AOR=10.66, 95% CI =2.39-47.54) of participating in other sex work than individuals who reported two psychosocial health problems (AOR=3.73, 95 % CI= 1.07-13.06).

Hypothesis 5 All psychosocial problems do not share equal importance with each dependent variable. Some psychosocial problems amplify odds of dependent variables more than others.

For the set of analyses, number of male personal Sex partners, HIV Risk and other Sex Work were utilized as the dependent variables, and each domain of the syndemic was used as an independent variable. For the purpose of control variables, education, age group 18-25 and poverty were utilized because of their statistical significance with each corresponding component of the syndemic. Both substance abuse (AOR=3.52, 95 % CI=1.26-9.64) and intimate partner violence (AOR=2.9, 95 %CI=1.4-7.49) appeared to amplify odds of HIV/STI risk as represented by increased number personal sexual partners. Depression was associated with increased odds of participation in other sex work (AOR=2.42, 95 % CI=1.03-5.68). Childhood Sexual Abuse appeared to increase the odds for HIV risk (AOR:=2.96, 95 CI % =1.05-8.39). These results are presented below in Table 10

Table 10.

Logistic Regression Models to Evaluate the Association between Syndemic Components and HIV/STI Risk Outcomes

Predictors	**HIV Risk**		**Personal Sex Number**		**Other Sex Work**	
	OR	95%CI	OR	95%CI	OR	95%CI
Education						
Did not Graduate High School	.96	.32-2.92	.47	.20-1.11	1.85	.82-4.17
Graduated High School	1.00		1.00		1.00	
Age						
Age 18-29	2.42	.27-21.91	1.50	.64-3.51	1.83	.81-4.14
Age 30-39	6.41	.64-59.10	.66	.17-2.61	.79	.20-3.11
Age 40 and over	1.00		1.00		1.00	
Poverty						
Indicated Poverty	1.13	.40-3.28	.52	.23-1.20	.98	.43-2.24
Did Not Indicate Poverty	1.00		1.00		1.00	
Substance Abuse	2.71	.61-12.135	3.52*	1.26-9.64	2.52	.92-6.92
Depression	2.44	.80-7.37	.72	.30-1.75	2.42*	1.03-5.68
Childhood Sexual Abuse	2.96*	1.05-8.39	2.05	.91-4.64	1.21	.54-2.69
Intimate Partner Violence	.84	.25-2.78	2.9*	1.4-7.49	1.24	.50-3.11

Note.*p < .05. All P values are 2-tailed Black and Other represent racial categories
Poverty is indicated if a participant applied for food stamps, received public assistance, or did not have enough money to meet basic needs in the prior 12 months.
Confidence Intervals including one are not statistically significant
Poverty is indicated if a participant applied for food stamps, received public assistance, or did not have enough money to meet basic needs in the prior 12 months.
Education, Poverty, Age, and poverty were utilized as control in each model

Summary of Quantitative Results

The logistic analyses of phase I met four of the five syndemic tenets. Salient findings suggest that childhood sexual abuse, depression, intimate partner violence, and substance abuse work in concert to amplify HIV/STI risk (decreased belief about HIV risk, increased personal sexual partners, and participation in sex work other that the AFI) among adult film actresses . Although the previous quantitative findings provide information on how the possible syndemic functions to increase the sexual health disparity of increased STI infection and subsequent HIV risk in this marginalized population, it fails to explore critical social issues referenced in syndemic theory. Theoretical deficiencies in the findings from phase I provided the rationale for ethnographic inquiry (Phase II). Phase II will allow the researcher to gain deeper understanding of the variables explored in phase I and examine social processes that may perpetuate HIV/STI risk among AFI actresses.

Phase II: Qualitative Results

This section of the chapter consists of the ethnographic findings from phase two of this mixed methods study, as well as demographic information from the participants in the in-depth interviews. The content in this chapter will be organized by the qualitative research objectives and research questions described at the beginning of this thesis, and followed by a summary of the qualitative findings (Noel-Thomas, 2010 p 101).

Demographic Characteristics.

The female interviewee's ages ranged from 24 to 59 years, with a mean age of 32.5 years in the sample. Only one woman was married; most participants were either

divorced or single. The majority of the participants were Caucasian. Four of the participants had at least one child, and no abortions were reported. All participants finished High School. The AFI actresses had 4.4 mean years of participating in the AFI, and performed 61 films on average. Table 11 presents the demographic characteristics for each interview participant.

Table 11

Sociodemographic characteristics of adult film actresses

Pseudonym	**Age**	**Ethnicity**	**Education**	**Marital Status**	**Number of Children/ Number of Pregnancies**	**Years in the industry /Number of films**	**Sexual Orientation**
Kylie	33	Japanese	Some College	Divorced	1child/ 1 pregnancy	5 years/ 100's of films	Heterosexual
Leslie	59	Hispanic, Mexican	Some College	Divorced	2 child/ 2 pregnancy	3 years/ 27 films	Heterosexual
Bella	48	Caucasian	Technical School	Widowed	1 child/1 pregnancy	5 years/ 50 films	Heterosexual
Marissa	27	Caucasian	High school	Engaged	1 child/1 pregnancy	2 years/ 50 films	Heterosexual
Kissie	34	Caucasian	Vocational College	Single	0/0	10 years/ 100's of films	Heterosexual
Alissa	35	Caucasian	High School	Single	0/0	6 years/ 100's of films	Heterosexual
Nina	24	Italian	High School	Single	0/0	2 months/ 13 films	Heterosexual
Laura	25	Caucasian	Finished College	Married, gay	0/0	4 years/ 50 Films	Lesbian

Note. N=8, Sexual Orientation is defined by who the actresses partner with off screen

Qualitative Findings.

Each woman discussed how she negotiates everyday challenges of the AFI actress syndemic. Although each woman dealt with different aspects of the syndemic, each participant discussed how intimate partner violence, mental distress, childhood traumatic

experiences, and substance abuse had significant influences on their lives and the lives of their peers. Furthermore, these women also discussed elements of the adult film industry's occupational culture that increased HIV/STI risk (as indicated by increased extreme scene choice and lack of condom use), disintegration of romantic and social networks, and negotiation of the retrogressive dynamic. Each theme is discussed below.

Objective 1: To identify and comprehend sociocultural factors which contribute to and/ or constrain the increased HIV/STI risk in the adult film community

Substance Abuse.

Substance Abuse is an integral component in the original SAVA (Substance Abuse, Violence, and HIV/AIDS) syndemic, and is particularly important for the female AFI syndemic in this study. Substance use is described by the participants as a way to cope with everyday life stressors or social suffering (Singer, 2009 p 152). Individuals who experience the additive burden of a syndemic self-medicate with drugs of solace (alcohol, tobacco, heroin and cocaine) to grant them ephemeral solace from stressful life situations, in order to cope with daily trials (Singer, 2009 p 153). Kylie explains how cocaine was a coping mechanism during a particularly rough time in her life.

"I have been [in] a position where I was doing coke every day. As soon as I said stop I stopped, I was in a really bad place for 6 months" - Kylie

Kylie went on to discuss how she also utilized alcohol to cope with a particularly extreme scene that involved her having double penetration and other sexual activity with four men at once. She utilized alcohol as a way to deal with a panic attack on the way to the

filming which highlights the use of the drug of solace to diffuse her panic of the extreme group sex scene.

"Last year I mashed five scenes into one month, and I hadn't worked for over a year, so…. I just got coked up for all them (laughter) Normally, I do everything straight up sober, because if I don't like the scenes sober, I am not going to like myself and I don't want to look in the mirror and hate myself. This time the scene was too much sober, it was too much for senses. I did a 4 -on- 1 and that was the first set that I was ever was drunk on, like I was driving to set and I had a panic attack, and I was like what am I doing to myself, why am I doing this to myself."- Kylie

Ethnographic data also provided information on how the peers of the participants utilized substances to prepare for scenes and recover from scenes. Marissa described the co-occurrence of drug use in addition to childhood sexual abuse, and corroborated Kylie's previous mention of drug use as a survival tactic to get through sexual scenes. Nina also reiterated Kylie's and Marissa's statements about drugs as conduits of solace during scenes. The following narratives illustrate this topic:

"A normal day for most girls is waking up doing drugs before they do a shoot, and then when they get off they get fucked up again. " – Marissa

"If you have a bad reality you try to do drugs to try to escape, a lot of the girls who have been molested already do drugs and get worse, some girls have to do drugs in order to do a scene." -Marissa

"Some girls do drugs, just to get through the scene." – Nina

Kissie discussed another aspect of drug use in the industry in which women's drug problems are so severe, that they inhibit physical coordination necessary for exotic dancing or stripping. Kylie also detailed how women who have more extreme drug habits often choose to use the adult film industry as the economic engine for their drug habit because films do not require as much physical skill as exotic dancing. In her

second quote, she reiterated Marissa's, Nina's and Kylie's claims that many women need drugs to film scenes, but notes that she never participated in drug use.

"A lot of girls do porn because they can't keep a schedule to strip, or they are too drugged up to strip; in porn they can take your lifeless body and do whatever they want…"-Kissie

"There a lot of girls that have to be high to be on set, I have never used drugs." – Kissie

Respondents provided insight into why drug use is so prevalent in the adult film industry; their primary rationale is that drugs are very accessible in the AFI. Participants also noted that the large amounts of money in the Adult Film Industry often attract individuals who tend to put a significant amount of their economic earnings into drug use.

"Drug use doesn't happen because of the nature of business, it happens because you can get a lot of money in a short amount of time. People turn to this business because they can get a lot of money; they can get really high, use all the money and then go and get high again." – Nina

Participants also noted that drug and alcohol use can negatively impact a woman's career trajectory in the industry. Laura related a story about woman was so inebriated that she was not able to perform in the scene she was scheduled to do, and her inability to perform gave her such a bad reputation in the industry that she could not find any work afterwards.

"I have never seen drug use on set. I have seen people show up high- one girl was so high she wasn't able to work again" – Laura

Mental Health.

Negative mental health profiles may intensify HIV/STI risk because negative mental health issues may increase the likelihood that individuals will participate in risky behavior (including drug use and unprotected sexual acts). Participants also discussed

how stressful life situations (fear of performing in extreme scene types compromised their mental health (Singer et al., 2009 p 115). Kylie explained in the quote below how her life became too stressful to bear and caused the deterioration of her mental health.

"I couldn't take it anymore, it was too much. I just lost it (my mind), I just blew a gasket, I felt like I was doing too much for too little. I drew the line, I lost my mind, I was tired of being walked all over." – Kylie

Kylie continued to further discuss the everyday embodiment of her mental distress and noted that she often becomes enraged in romantic relationships when she feels that she is not being listened to. Kylie's mental health issues fueled her participation in intimate partner violence (another component of the female AFI actress syndemic).

"All of my relationships are pretty shitty because I have such a bad temper. I get upset when I am not being heard or not understood, I don't like to feel like my feelings are being acknowledged, like you don't give a fuck. When I feel like that it is happening, I just lose my mind, I just straight up blow a gasket, and there is nothing I can do to stop except to tell that person how I feel and why it is happening, 'You don't respect my feelings and that is why I am losing my mind.'" –Kylie

Participants perceived mental health distress in the AFI to be prevalent among AFI actresses. Kissie described her personal experience with mental health problems, stating that, "I am on Antidepressants on every porn I have ever done. I've tried to kill myself." She also discussed the high prevalence of mental illness in the adult film industry, and the possibility of participation in the industry worsening mental illness:

" I think 95% of people in the industry have mental health issues, they should make a law that people who have mental illness you shouldn't be able to do porn, it can make you worse" –Kissie

Furthermore, she also detailed how AFI actresses often substitute drugs to create solace from mental distress in lieu of limited accessibility to mental health services. Interestingly, Kissie discussed how substance abuse caused short term comfort, but also

exacerbated existing mental health issues among her peers. She further explained that "half of the mentally ill people who have not gone to a psychologist are on heroin or meth, which makes them crazier."

Marissa also described how mental illness is displayed on AFI sets. She noted that actresses' exhibition of unprovoked personality and temperament issues were the most common indicators of mental illness on adult film sets.

" There are a lot of girls who are crazy, who will go off for no apparent reason, they yell and scream on set, they have outbursts, they get into the industry and they start shooting a lot" – Marissa

Laura expanded the mental health domain through discussing quantitatively unexplored mental health issues. For instance, although the statistical analyses in Phase I solely focused on depression, Laura's ethnographic information introduced bipolar disorder as an pertinent mental health condition to be included in the mental health domain of the AFI actress syndemic. Laura also explained how she decided to manage her symptoms of her bipolar disorder without prescribed medication after she experienced extreme side effects (dangerous weight loss) from her prescribed psychotropic drugs. In her second quote, she describes her bad days and highlights the occurrence of panic attacks, but notes for the most part she has been able to manage her mental health without medication and has a better quality of life without the psychotropic drugs.

"I am diagnosed bipolar; I used to be on meds, and they made crazier than I am. When I was on meds, I only ate once a week, I didn't want to eat. I lost 35 pounds. I got off the meds the first year of college; since then I have managed it on my own. I just accept that I am going to have bad days"- Laura

Intimate Partner Violence.

Interestingly, participants in this phase did not perceive intimate partner violence to be prevalent among AFI actresses. Kylie discussed how her rage caused her to want to physically assault her boyfriend. In the interview, she recounts how her partner called the police to avoid another assault at her hands.

"He just knew I blew a gasket and I was going to maim him bad… I can't say why I was mad, he just wasn't listening to me".- Kylie

*"After the Police left, I just broke all of the lamps in his front yard, I just didn't give a fuck I was like it's my first offense I won't do too much tim*e" – Kylie

"I throw bitch fits, tantrums, I scream, throw things, slam doors, and if it gets really bad I will assault you"- Kylie

Bella also notes that she has witnessed domestic violence at the hand of partners on set.

"He just smacked her in front of me" – Bella

Traumatic Childhood Experiences.

The ethnographic findings expanded the quantitative childhood sexual abuse domain to include additional traumatic childhood experience, which encompass physical abuse and negative childhood experiences in addition to sexual abuse. These earlier traumas may become embodied, or may become internalized and result in lifelong adverse health effects including, anxiety, depression, impulsivity, increased HIV/STI risk and likelihood of participation in substance and risky sexual behaviors (Singer, 2009 p 34). The exploration of this population's childhood experiences can be utilized to contextualize statistically significant findings in the quantitative section of this thesis which highlights the relationship between childhood sexual abuse and HIV/STI risk. Interview participants indicated a number of negative childhood experiences in addition to childhood sexual abuse that may also increase HIV/STI risk. For example, Kylie

described the difficulty of being a child of a mentally ill father and an alcoholic mother, in the following narrative:

"My childhood was pretty dysfunction, now that I talk to people who had normal childhoods, my mother was an alcoholic and my father was manic depressive, I supposed you don't notice these things until you get older." – Kylie

According to Singer (2009), a substance-addicted mother will have an increased likelihood of neglecting her children (Singer, 2009 p 35). Similarly, mental illness often affects not only the afflicted individual, but the entire family.

Leslie explains a myriad of childhood traumas that included observing intimate partner violence perpetrated by her father and the seminal traumatic event of witnessing her father shoot her mother and then commit suicide. She makes the connection between rampant alcohol abuse in her family and traumatic childhood events.

"My dad was a chronic alcoholic, and he would at times beat my mother and beat my brother. Umm... when my parents died, he shot my mother and killed her, and then shot and killed himself. Alcoholism is rampant in my family, I am also a recovering alcoholic, my sister is a practicing alcoholic, my brother is a more like binge drinker. We are all still recovering." - Leslie

Bella, furthermore, spoke of the resentment of being taken away from her family, and subsequent hatred of being removed from her home while her molester was allowed to stay.

"I was abused as a child, I was taken away from my family at age of eleven because I was being molested, and the hatred began to build up in me, like why is he at home and I was the one who was molested, after that I was emancipated at 15- Bella

Not all interviewees experienced personal childhood trauma. Marissa, for example, did not experience childhood trauma herself; she described her childhood as impoverished but loving. Participants, who did not experience traumatic childhood experiences, were acutely aware of the high prevalence and negative influence of the psychosocial problem

in the lives of their colleagues. Marissa relayed the following story about one of her peers industry who was molested as a child:

"One girl was sexually molested as a child, she was used to the rough stuff, and she sees herself as a piece of meat, she was used to doing everything, (gangbangs, dp) and she said she was used to it, she would do anything." - Marissa

Furthermore, Marissa estimated that at least half of her adult film counterparts had been molested during their childhood.

"child sexual abuse and rape are really common, probably over 50 % of women in the industry have been sexually molested or raped or had something sexually horrible happen to them" – Marissa

Kissie detailed her physical abuse at the hand of her brother and discussed how the memories of the abuse prevented her from entering any physically abusive relationship in her adulthood. Furthermore, Kissie discussed how the experience of childhood sexual abuse was a mechanism that made her stronger and less likely to engage in abusive romantic relationships.

"I was abused as a child by my brother, I had to get stitches in my chin, that is how bad it got, I would go to school with bruises on me"- Kissie

"There are two roads I could have taken after the childhood abuse, I could gotten into an abusive relationship, but I took the other road, and I decided I'll be damned if any man is going to put his hands on me" –Kissie

Adult Sexual Abuse (Rape) and Forceful Sex.

Ethnographic interviews expanded the domain of Adult Sexual Abuse (Rape) to include consented but unexpected forceful sex among the adult film actress population. Multiple participants detailed their own rape experiences and the experiences of their counterparts with rape in their personal lives and on adult film sets. In the quote below, Bella discusses how her male friend drugged her, allowed other men to gang rape her, and forced her to participate in an adult film with him. She details filming more adult

films after the rape to "bury" the rape film with consensual adult films. Her strategy was to increase online content featuring her and saturate the Internet with films that she had control over and consequently make it more difficult for consumers to find her taped rape at the hands of a former male friend.

"My worst experience is being drugged and gang raped. I knew the guy for years, we made a quick stop, and he offered me a soda, and that's the last thing I remember for days. I just remember coming to once in a while and being repeatedly gang raped. I know it was because I was in porn they thought it would be okay. When I finally started coming to, I couldn't walk, so I played nice, and I agreed to shoot a video for him, I played nice, and finally got him to take me home, and when I got there I called the police and the police surrounded the house and arrested him. For months after that I was harassed. – Bella

Kissie detailed multiple rapes in her lifetime. The first rape occurred on set and was filmed, and the second occurred with a man from her personal life that she met on Craigslist and with whom she later went on a date. On the date, she was raped. She said that the brutal rape was fueled by his use of Methamphetamines. She also described being beaten twice, and two other attempted rapes, one in which she was drugged with Flunitrazepam or Rohypnol, a drug that was initially created to treat insomnia but is often used to as a "date rape drug" to subdue individuals and prevent them from fighting off their attacker (Lledo & Banks, 2011). These experiences are discussed by Kissie in the following narrative.

"I was raped on a porn set, and that was my first rape. He made me puke and eat my vomit, my second rape happened with a guy who I met on Craigslist and that was really brutal, he was on Meth. I can't believe I survived that, besides that I have had two assaults, I got roofied in high school. He attempted to rape me, and there was like two other times, once I was drunk and [a] rock band thought that they could take advantage of me" – Kissie

Marissa discussed her experience with consented, overtly forceful oral sex on an adult film set. The rough oral sex was so extreme that she struggled to breathe, and vomited multiple times. She noted that she did not expect the scene to be so extreme and described her subsequent negative feelings from the extreme oral sex scene.

"My worst experience was when I did an extreme scene, I was sick at the time and this type of scene is pretty much putting you on a couch and seriously gagging you until you puke all over yourself, it's like you are not even there. I couldn't breathe because my nose was stuffed up, I would push him away and I was like dude I have to breathe, they told me to blow out my nose and let the snot run. I puked like six times because they rammed me, the guy who I was with was disgusting and I hated him. I felt disgusting, I wanted to go home and scrub myself." – Marissa

Laura, on the other hand, was never sexually assaulted, but recounted knowledge of an AFI company that is known for raping women. She took notice of the company when one of her friends who was known in the business for shooting extreme porn said that the company raped her on set. Often women are told that they can stop if the sex scene gets to be too brutal, but when they were in the moment of the sex scene they were not allowed to stop.

"This one company should be run out (of the industry).Several of my friends would describe their experience with the company as rape; they shoot very extreme, abusive porn, which is fine if it's done with actual respect for the performer. There is a difference between making something that appears to be degrading (and appears to be the nastiest of the nasty) that's okay if you have the performer's consent. This company hurts people, they lie to people and they say girls get to use a safe word (if they want to stop), but if girls use the safe word, they don't stop the sex. If they do stop the sex the girls don't get paid. They don't actually respect the performer in the scenes. They are not doing a rough sex fantasy it is actual abuse. They are consciously abusing performers, it is reality."-Laura

Laura went on to elaborate on the roughness of what she called a bad company below. This account goes into deeper detail about her friend's rape on the adult film set of the company she mentioned in the quote above.

"They will promise girls they will have a safe word, they say that girls will able to stop if it's too hard but they don't let you stop. My friends were told that a scene was going to be less rough than it actually was. One of my friends attempted to stop the scene and the male performers wouldn't stop, they were hurting her. She kept saying stop but the male performers wouldn't and my friend is one of the toughest girls in the business, and she said they raped her" – Laura

Preparation and Departure Rituals.

The preparation and departure rituals theme examined behaviors that actresses perform to prepare or recover from a scene. Participants often vaginally douche before and after scenes. Other women in the study also noted drinking alcohol or taking drugs before performing in scenes or to cope with the more extreme acts after adult film. This theme explores behavior and decision making which may increase HIV/STI risk before and /or after scenes.

Douching.

Leslie, Bella, Marissa and Kylie douched after scenes. Marissa reported that she douched to prepare for scenes, and noted that she douched with water instead of the over-the-counter douching products to prevent yeast infections.

"After every scene you use water. You can't douche with the stuff in the bottle, that's bad for your underparts" – Marissa

Kissie, furthermore, detailed an intersection between drug use and douching, noting that women who participate in profuse substance abuse often douche more than women who do not use drugs.

"A lot of women in the industry believe that instead of going to get treated they can douche it away." – Kissie

"A lot of the girls who do drugs do not have time to take care of their hygiene and are told to do douche." – Kissie

Social Networks.

The social networks theme consists of qualitative data that details the influence of participation in adult films on AFI actresses' familial, romantic, and social networks, and the link between the change in these relationships to HIV/STI risk. Participants reported positive relationships with their families and friends; most of the relational negativity was reported in their romantic relationships. Every woman in the study except Marissa noted that they had negative experiences with romantic partners that ranged from their difficulty in trusting men and finding partners. Participants also detailed dealing with the impulsive spending habits and alcohol abuse of romantic partners. Each woman who reported romantic relationship difficulties attributed these challenges to their occupation as an adult film actress. The last portion of the theme details how the participants felt limited in terms of their ability to pursue other careers due to their participation in adult film.

Familial.

AFI actresses discussed how the knowledge of their participation in adult film industry has altered their relationship with their children and other family members. Bella described how after a period of participation in adult film, her family now accepts her occupation.

"Acceptance is key, I like it when I look at family and friends and there is an inviting look on their face, I think that is success in relationship."- Bella

"*Everyone in my family knows what I do, they don't degrade me.*" – Bella

Leslie, on the other hand, discussed how her daughter is protective of her when she goes to work.

"My children know that I am in the industry. I live with my daughter, and my son will be forty in a couple months. They know I am in the industry, they would prefer not to know the details. My daughter wants me to text her when I arrive and when I am headed home from doing films." – Leslie

"I find that the longer that I am in it, I am more comfortable going to porn conventions, and discussing it with my family. I am not trying to shock people; I want them to understand that I am trying to create something hot and sexy." - Leslie

Friendships.

Participants in the study discussed how they have built new friendships with their actress colleagues and how some pre- AFI friendships have ended as a result of them participating in the AFI. It was more common for individuals to have been open about their sexuality with friends before entering the industry, and many participants noted that the friendships that they maintain during their involvement in the industry continue because their friends are not shocked or judgmental of their work in the industry. Bella, for example, discussed how new friendships have been developed as result of participating in the industry, and she now has a large number of female friends.

"My relationships with my girlfriends have gotten better, I have more good girl friends than I ever have."- Bella

Romantic.

Most participants reported tenuous romantic relationships. AFI actresses reported difficulty in finding and maintaining romantic relationships. All but one participant attributed romantic relationship difficulties to their participation in the AFI. Many women noted that, it was easy to have sex, but difficult to have a relationship. For example, Kissie noted that, "I can have sex easily, but I can't really let guys in". This type of social

dyad was reported to be the most adversely affected by participation in the AFI. Interestingly, the only three women who did not have romantic relationship difficulties were women whose partners were swingers or women who had retired from the industry. The following narratives illustrate the challenges reported by interviewees in obtaining healthy romantic relationships:

"*It's fucked up a lot of personal relationships, you have a boyfriend and it's not good." I had a relationship that was disastrous. Oh God, he was an alcoholic, he was liar, he spent too much money."* – Kylie

"*Porn affects my everyday life, it's really difficult, if I am dating someone it's really hard. I am not girlfriend or marriage materials, guys only want booty calls once they find out."*- Bella

"Because of porn, I do not have healthy relationships, I believe that every man is going to cheat on me, I see a side of men that I shouldn't .I think that all men want really raunchy sex and if you don't give them raunchy sex they will go elsewhere."- Kissie

Society.

This portion of the social network theme consists of AFI actresses' perspectives on their relationship with American society. The most common response in this theme includes how participation in the AFI often constrains women's occupational choices after their tenure in adult film.

"Once you do porn, you almost have to be self-employed." –Bella

"I am capable of doing more than porn; I have done more in my life." – Bella

"I own a business and I keep that very separate from porn, I am worried about what might happen if people knew." – Leslie

Objective 2: To identify and comprehend the sociocultural factors within the AFI that constrain or perpetuate condom use and condom negotiation in the AFI

Condom Use and Contraceptive Methods.

This theme differs from the political economy of the condom by emphasizing the AFI actresses' perspectives on condom use in their personal and occupational sex lives. Furthermore, this theme also examines the contraceptive method of birth control due to information gleaned in the researcher's previous work (Sibley et al.,2008) suggesting that actresses have gotten impregnated during occupational sex due to lack of use of condoms or birth control use. Interviewees confirmed the lack of condom use in the industry, but interestingly, many of them did not challenge this status quo. Leslie noted that she never used condoms in her personal life or on set, and she also stated in the interview that she uses monogamy as HIV/STI prevention in her personal life. Leslie also uses monthly testing as HIV/STI prevention in her occupational life.

"I personally think there should be condoms; I don't do anything with anyone outside of work unless I am monogamous." –Leslie

"I have never had protected [sex] with any lovers, I know that there is a big controversy, I don't feel uncomfortable if there are no condoms on the set. The way I look at it, I make sure that I check the actors ID against the test results that I see and I check the date, I make sure I get to know them, I talk with them before the scene, I get an idea about how often they are sexual. I have never felt uncomfortable enough to ask anyone to use a condom" – Leslie

Bella discussed how she began using condoms in her production company but stopped because she developed trust in the colleagues with whom she was shooting and that she consistently uses condoms in her personal life.

" I was using condoms in my company for a while, but I stopped, everyone in my company we get tested like clockwork and we only shoot with each other" –Bella

Marissa also discussed rarely using condoms or other forms of birth control while in the industry, and discussed how non- condom use has also spilled over into her personal life because condoms may cause vaginal dryness.

"When I was in the industry I wasn't on birth control, I used the pull out method, I was really lucky." – Marissa

Kissie corroborated Marissa's statements about actresses' lack of condom use in their occupational or personal lives.

"Your average porn star is having a lot of sex on set and off of set, you are around more people who are willing to be sexually active no strings attached. A lot of people in the industry do not protect themselves when they are not in porn." – Kissie

Some participants, furthermore, did not believe condoms to be effective prevention of HIV/STI acquisition, and thus saw no reason for using them. The following quotes detail the beliefs of actresses on condom and contraceptive use. Alissa expressed that she does not use condoms in personal life, as a swinger, or in her professional life because she does not believe that condoms prevent disease or pregnancy.

"I would never ask to use a condom, there is no reason to if you know a person and their lifestyle; there's no reason for a condom."-Alissa

"*Condoms don't do anything. They do not help you with you [to avoid] any diseases; they don't help with pregnancy; you are in just as much danger with or without a condom.*" – Alissa

Scene Type.

This portion of the ethnographic data provides information on the continuum of scene type that actresses participate in. Figure 8 (below) illustrates how HIV/STI risk increases from least risky (rough oral sex) to most risky (double penetration) scene types in which the participants perform. Some actresses in the study (Bella, Leslie, Marissa,

Nina, and Kissie) use bodily exclusion zones (not allowing access to certain body parts, namely the anus) to decrease HIV/STI risk in their occupational lives. Other actresses (Alissa and Kylie) perform in all scene types to maximize their earning potential. In the following quotes, the actresses either discuss their progression of participation into more extreme scene types. Participants also discussed their decision to create bodily exclusion zones and opt out of participating in more extreme scene types including double penetration (DP), anal, or gangbangs.

"I haven't done gangbangs or DP, I am pretty vanilla." – Bella

"I do not do Anal."- Nina

"I do every type of scene, I do it all, everything from balloon fetishes to anal to dp to gangbang."- Alissa

"I do everything, anal, DP, gangbangs; I do it all." –Kylie

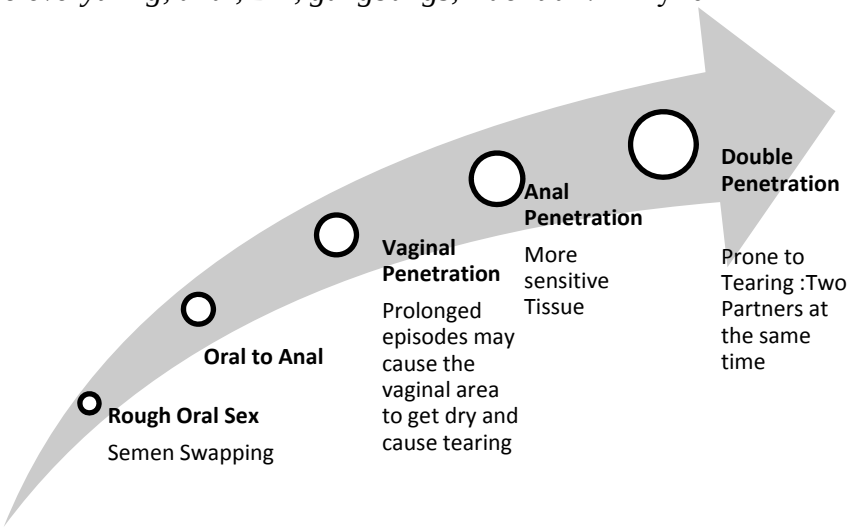

Figure 8. Scene Type among Female adult film stars and Associated Risk

Note: The second bullet "oral to anal" means removing a penis from a female's anus and putting it directly into her mouth

Political Economic Context.

This portion of the ethnographic data discusses the synergy between the influence of the economic and politically powerful individuals (agents and directors) and HIV/STI risk among adult film actresses. This theme emphasizes how a combination of the problematic spending habits, the retrogressive dynamic, and the power structure in the adult film industry work to form the political economic context that contours and maintains the status quo of adult film actresses, agents and directors. This context creates conditions that perpetuate consistent risk behavior in the industry (Singer, 2001).

Spending Habits.

Kylie discussed the inconsistency of occupational income in the AFI, and how the flow of income differs from most jobs where an individual receives a regularly scheduled paycheck. According to Kylie, AFI actresses need to save their money to prepare for times that are more economically challenging. She conversed about how women who fail to save their money, may be forced to perform in more extreme scenes to continue to participate in the common AFI actress lifestyle of conspicuous consumption of luxury goods including expensive handbags and designer clothing.

"Just because you are making $10,000 this month doesn't mean that you are going to make $10,000 next month; you have to allot money for bills." –Kylie

" A lot of girls blow through their money because they buy Louis Vuitton bags. I can't do that, it doesn't make any sense. It makes sense to them, but I have 10 to 15 years on these girls."-Kylie

"They buy bags, clothes, shoes, a Mercedes, a Lexus, it's like are you going to be able to afford it in a year? Buy a simple car and upgrade if you can afford (it)." – Kylie

Leslie, furthermore, discussed the intersection between drug use and quick spending of money among her colleagues, and how drug use often perpetuates rapid spending patterns.

"A lot of young girls fall into drugs, and the need to party and making decisions that aren't in the best interest of their career, if you decide you want to do this then make some money at it, be smart about it."- Leslie

Retrogressive Dynamic.

In many careers, more experience is viewed as an asset, but in the AFI experience is viewed in the opposite fashion. The economic dynamics function differently in the industry. Women who shoot more and do more extreme acts are paid less over time because of "overexposure and sexual predictability" (Escoffier, 2007 p 187). Youth, decreased quantity of films, and later introduction to extreme scene types (double penetration and anal) are considered assets in the adult film industry. The previous components add to the occupational asset of actresses being considered young, fresh and new to the adult film consumer. Marissa described her strategy of "being smart" or interrupting the current of the retrogressive dynamic trend as starting in the industry by doing less extreme acts (girl-girl, or just one partner) until her number of bookings decreased. When her bookings of on scene type decreased she gradually moved on to more extreme acts as her career progressed.

" A girl has been shot out, when no companies will hire you any more, your prices go down, when you've been shot out people will pay 700 dollars instead of 1,000 for girl - boy scene"-Marissa

"You also get shot out when you do everything (anal, gangbangs, dp, anal, bukkake), things other girls won't do too fast, it is smart if you come into the industry and only do boy- girl, and girl-girl. The idea is they want to[get] your first interracial scene, 6 months after that you start doing multiple partners then you can booked again, and then you do anal, and then doors open up especially if the girl's good then they want that anal scene."-Marissa

Laura explained the heightened premium on women performing their porn "virgin" scene (first time performing a certain sex act on camera) and noted that girls have to gain more skills in order to survive in the industry after performing in their virgin scene. If a woman does not understand how to negotiate her assets of being a person who has not shot much (is fresh) and begins shooting too many extreme films, her career potential may become limited very quickly (Escoffier, 2007).

"It's the dollar signs, the dollars signs always grab hold of the girls, and they get blinded by the dollar signs. Sometimes they come in as an extra not intending to have any sex and then they get tricked into doing extreme sexual stuff." –Laura

Political Economy of the Condom.

This component of the political economic context theme details how powerful individuals (producers, directors and distributors) in the industry prevent condom use due to a fear that the fantasy created in pornography will be interrupted by condom use. Furthermore, this theme also speaks to how the "politics of the condom" continue to perpetuate the cultural norm of unprotected sex in the heterosexual AFI. This theme is also connected to the power structure and hegemony and discussed in greater detail below because hegemony often constrains condom use on set among AFI actresses and lack of condom use often results from the disdain of safer sexual practices by the powerful in the industry. Participants discussed how the request of condoms causes an actress to be replaced or not be able to work in the industry.

"If you want to use a condom, you get replaced, that is the price you pay. You know what you are getting yourself into." – Kylie

"If a girl said that she wanted use condoms, they would say we can't shoot it."- Kissie

Power Structure and the Display of Hegemony.

This qualitative theme explores the concept of power and provides the examination of unequal power distributions, the discussion of the function of subjugation and dominance between the powerful (distributors, directors and agents) and actresses. The distributors, directors and agents maintain the majority of political economic power in the AFI as a result of this group's ability to dictate when, how, and what is filmed. They can also halt filming (subsequently stopping employment opportunities for actresses in the industry) and continue to create economic capital through piecing together snippets of previously taped films to make compilation films. This allows the distributors and agents to make profit multiple times throughout multiple years and only pay AFI actresses once.

Hegemony is an interdependent concept in which the powerful group furtively inflicts their power on the group with less power, so that their rules and regulations seem to be the normative and inherent way of life. The role of hegemony in the AFI leaves female performers feeling like they have little control over the scenes they shoot, and limited power to refuse increased scene type extremity or lack of condom use. Kissie discussed feeling vulnerable during a scene and being forced to continue when she wanted to stop. She continued to discuss her feelings about the women in porn by noting that AFI actresses are very low on the power totem pole. Kissie states that "Women in porn are considered the lowest class in society. If any actress tries to fight they are going to lose." Participants often believe that they lack power and that any attempt to counteract power will fail.

"You are in a vulnerable situation, directors tell you that 'you said you would do this,' and it's forced." – Kissie

Laura described participating in one of her first films, and expressed how her newness and ignorance to the power structure of the industry caused her to trust the director of the film to pay her. Unfortunately, the director failed to pay her for the scene and subsequently gave out her contact information to an individual who harassed her. Laura also explicated how some of her peers confided in her about their experiences with hegemony in the industry through agents not protecting women from a company that numerous actresses have complained was too rough with them. The director's exertion of power can also be observed through powerful individuals consistently attempting to coerce women into performing in more extreme scenes. The previous scenario is an example of how the industry utilizes more extreme acts as assets to increase economic capital and acquire more clients. A large part of the industry feeds off fulfilling a fantasy of extreme sex that most adult film clientele are afraid to perform in their real lives. Moreover, the adult film industry juxtaposes these more extreme acts against the consumer's normative view of sexuality to provide an increasingly more extreme fantasy which customers can live through vicariously (Escoffier, 2007).

"I see some girls clinching their teeth and letting things happen that they really don't want to do, a lot of girls don't stand up for themselves; they will let producers or directors grab them. I know it's the sex industry but it's not a free for all." – Laura

"I have seen girls get pressured into doing their first time anal sex ever on camera, that's terrible…..that is something you work up to , it is not supposed to be that way, if you don't know anything about yourself, girls just do anything."- Laura

"They are going to push, but you have to be able to push back, people have tried to get me to do all types of things."- Laura

Hegemony functions in the industry through women getting taken advantage of due to fear of not getting paid. The second quote also discusses how hegemony often occurs

through the process of men exerting their political – economic control over women. The majority of women mentioned that they expect for producers or directors to hit on them on set because the business is controlled by men.

"Girls get taken advantage of all the time by producers and directors, and the girls don't like it, but they feel like they have to do it or they won't get paid, I walked out but some girls don't." – Nina

"Some people get lost in porn, there is so much BS in the business because the business is controlled and ran by men, and it's a dirty business it really is, there is going be a director who is going to hit on you."- Nina

Objective 3: To understand Adult Film actresses' experience with STI seropostivity.

Experience with STIs.

This portion of the ethnographic data provides information about the actresses' experiences with Sexually Transmitted Infections (STIs) that were not explored in the quantitative portion of the study and provides preliminary information on the details of obtaining a positive test. Kylie noted that one of her tests came back positive for both Gonorrhea and Chlamydia.

"I have been medicated like a thousand times for STDs, not a thousand times but enough , at least 10 times, the most common are Gonorrhea or Chlamydia, sometimes you get double whammy, you get both" – Kylie

Leslie discussed how being new to the industry and being ignorant of the need to test resulted in her first positive Chlamydia test. Marissa also discussed her experience with the high prevalence of both Gonorrhea and Chlamydia in the industry, as well as how some individuals take advantage of the time period between testing to allow them to keep filming.

"Since I am new to the industry, my first job was in New York, we made the plans that they were going to pick me up, no one told me I needed to get tested, so I flew in without being tested. When I finally got the knowledge, and got tested at AIM I found out that I had Chlamydia. It would be nice if there was more of a focus on educating the actresses.

I went there and I was naive and nervous, I was surprised that everyone was professional; I get treated like a real actress." – Leslie

"*A lot of people get Gonorrhea and Chlamydia; those go around like crazy, some people will get Gonorrhea or Chlamydia, and they will get a shot to clear it up, and or I know this guy who will keep shooting with Gonorrhea and he keeps spreading it around because his AIM test is still good. He's shady; why would you want to go around and give people a disease?"* – Marissa

Kissie discussed how she had both STIs in her throat following her rape on an adult film set, and that the seropositivity of the infection was only found because her rape involved oral sex, but noted that women in the industry do not get routinely tested for the infections at the anatomical site of the throat.

"I had Chlamydia and Gonorrhea in the throat after my rape on set and they do not routinely test in the throat." – Kissie

Laura contextualized the excerpt below by saying that the prevalence may be high from some of the non-reported sexually transmitted infections and also notes that the industry fails to test for Herpes and genital warts. However, the occupational cultural norm is that it is unacceptable to arrive to a shoot with visible STI symptoms. Laura discussed high prevalence of sexually transmitted infections in the industry to the extent that she believes that individuals doing riskier scene types that involve both males and females and lack of condom use in the industry make positive STI tests inevitable. Lastly, Laura discussed her personal experience of doing a scene with a colleague who presented with symptoms of bacterial vaginosis and how she advised her to see a physician.

"Herpes is common, Genital warts are common, the rule is don't show up to set with an outbreak, the testing system is not a perfect system."- Laura

"I have had a friend come back with a dirty tests, you know Gonorrhea and you take the pills and you're cured, and I know girls who had it two or three times."-Laura

Objective 4: To understand the protective and survival strategies of adult-film actresses.

Protective and Survival Strategies.

In addition to exploring the qualitative dimensions of risk and additional components of the female adult film actress syndemic, this portion of the study also inquired about how these women employed their agency to survive in the industry. Four categories of survival strategies including protective measures (before, during, and after scenes) as well as the theme of personality of toughness, were explored in the excerpts below..

Before Scenes.

This theme specifically addresses the protective strategies that actresses use before they go to an adult film set. Participants discussed the use of intuition and research as tools for protection before working on adult film sets.

"I would advise women to go on their gut feelings, don't let anyone push you over, if you don't feel comfortable with the situation don't do it."- Alissa

"I do my research on people before I work with them, check their references with other girls." - Alissa

"Some girls have online resumes to get work outside of the industry, and because of the BS you have to check everyone's credentials because there are some, many scumbags who will try to get over on you, they pretend to be agents, guys have called me and they are just pleasuring themselves, they are creepers, they aren't real agents." – Nina

During Scenes.

This theme examines AFI actresses' use of safe words and physical cues that actresses use to inform their colleagues that sexual activity is painful or too rough for them. Participants also discussed working with women, men, and companies that they trust to increase the likelihood that they will be safe on adult film sets.

“ If I am hurting I usually squeeze somebody’s leg and let them know to ease up a bit, there was a time when they didn’t and I kicked ‘em”- Kylie

“ *A lot of girls use a safe word to let their partner know to stop or that they are being hurt*” – Nina

Post Scenes.

This theme consists of actresses’ behavior after they finish filming adult films. Participants discussed not participating in sex in their personal lives, drinking, or using drugs as mechanisms to recover after participating in adult films.

“ I like to be able to just walk away from the set. It’s funny because I like to isolate myself for about a day just so that I can balance myself out again and I am healthy and I am concentrating on making money, I don’t know if that would happen if continued to have sex with co-stars It’s not a good idea to go beyond the business aspect of it, and carry it on beyond that basic business agreement.” – Leslie

“ I have taken a day off after filming from the beginning because I am not sexual unless I am on set, during the scene, especially pre orgasm, there is a lot of force being used, I need to recover mentally and physically, I want to make I sure I feel at ease.”-Leslie

Personality (Toughness).

The last category details how all women in the study discuss developing a personality in which they were not afraid to speak up if they did not like something happening on set and not being afraid to express negative feelings. Two women (Kissie and Kylie) also discussed walking off of the set when things were not right. All actresses except for Leslie described how women in the industry who are not tough become vulnerable to being pushed around by agents or directors to perform in more extreme scenes.

“I love my job, I am actually extremely happy to be in porn, I don’t think it is everyone’s experience, (I am a tough bitch) I know a lot people get hurt by this industry.”- Laura

“When I do not like what is happening, I have no problem speaking my mind about it. I will let you know, I will speak up, I don’t take anything for anybody period.” –Kissie

"I will tell you one time nicely, I will tell two times a little more harshly, and then I will hit you."- Kylie

"I have a big don't fuck with me attitude." –Kissie

"I didn't like the way the director was addressing me and I gave him a chance to apologize and he didn't so I said thanks for the free make up and walked off of set." – Kissie

Perspectives on Adult Industry Medical Health Care Foundation (AIM).

AIM was the main source for monthly testing in the Adult Film community until March 2011, when a major breach of the website which housed all testing information for the AFI actresses occurred by an outside source who posted the confidential testing information on a website called Porn Wiki Leaks. Following the previously mentioned incident, AIM closed its doors and filed for bankruptcy on May 3rd, 2011 (LA Weekly, 2011). Viewpoints on the foundation varied in the interviews. Kylie noted that she thought that AIM's system was imperfect but pragmatic and helped her reduce her HIV/STI risk. Kissie noted that she was happy when AIM closed its doors because she did not feel that employees at AIM were advocates for adult film actresses, and did not provide her with the correct follow -up care after her rape and subsequent Gonorrhea and Chlamydia diagnoses, and believed that AIM's procedures jeopardized her health by failing to provide appropriate care.

" I don't have a problem with AIM, they do the best they can do, really with the 30 day rule something's going to get in, you can't get tested every day, but if someone goes and does something after work it's going to get in, there's nothing you can do about, it could be 30 days, it could be 2 weeks, the best way to prevent is to use condoms…"- Kylie

" *I am glad that AIM got shut down, because they did not do my follow- up care right after my rape, plus they refused to give the test result to the CDC during one of the outbreaks*" – Kissie

Summary of Qualitative Findings

Critical qualitative findings provided information on qualitative aspects of the quantitatively defined syndemic and expanded the domains of the childhood traumatic experiences and mental distress. Salient qualitative findings also shed light on the relationship between substance abuse of solace to cope with extreme scene types, rapid spending habits, and increased HIV/STI risk. Moreover, the findings also exhibited how the aforementioned relationship may continue in a reinforcing loop in AFI actresses' lives and may be difficult to interrupt. The qualitative findings also provided an understanding of the processes (hegemony and political economy of the condom) which constrain condom use among AFI actresses. Salient qualitative findings provided information on meso (social networks) and macro level (power structure and hegemony) factors which contribute to amplified HIV/STI. Lastly, the qualitative findings also provided critical data on the connection between drugs, mental health, and increased participation in extreme scene types.

Chapter Five

Discussion, Integration of Data, Limitations, Implications, Calls to Action, and Dissemination

Chapter five consists of five sections. The first section is the discussion of the quantitative and qualitative results. The second section includes the discussion of both strands of the results through the integrated syndemic ecosocial lens and the mixing of quantitative and qualitative strands. The third section consists of the study's limitations. The fourth section of this study consists of the implications. Lastly, the fifth section consists of the dissemination plan of this inquiry.

Section I: Discussion

Phase I: Quantitative Findings.

The Chi Square analyses in hypothesis one, fulfilled the requirements of syndemic tenet one and suggests that depression, childhood sexual abuse, substance abuse, and intimate partner violence are interrelated and form a syndemic. Quantitative findings also suggest that this syndemic works additively to increase HIV/STI risk as indicated by augmented odds of increased number of personal sex partners, self -reported HIV risk, and participation in other sex work. These results are corroborated by other syndemic studies which imply the possibility of a syndemic in street level prostitutes

(Romero Daza et al., 2003), Men Who Have Sex with Men (Stall et al., 2003), Young Men Who Have Sex with Men (Mustanski et al., 2003), and high risk clients at low income HIV/STI clinic (Senn et al., 2010). This research extends the syndemic theory to the new population of female adult film actresses. Statistically significant values on the biviariate level (unadjusted odds ratios) between cocaine, methamphetamines, and needle use and intimate partner violence are corroborated by Mustanski et al's. (2007) findings that present similar statistically significant relationships between street drugs (which include cocaine, needles and methamphetamines) and Intimate Partner Violence (Mustasnki et al., 2007). Stall et al's (2003) findings also support an association between polydrug use and intimate partner violence (Stall et al.,2003; Mustasnki et al.,2007). Interestingly, Stall and Mustanski's findings also parallel this study's findings of a statistically significant relationship between depression and intimate partner violence, in addition to, an relationship between depression and drug use (as indicated in this study by methamphetamine use) (Stall et al.2003; Mustanski et al.,2007). The statistically significant relationship between childhood sexual abuse and drug use was also found by Senn et al., (2010). The research is the first to highlight a similar statistically significant relationship between childhood sexual abuse and adult sexual abuse (rape) which Singer included as a component of the commercial sex worker syndemic (Stall et al.,2003; Singer, 2009; Senn et al.,2010). Both statistically significant relationships between adult sexual abuse and intimate partner violence, in addition to, adult sexual abuse and depression were documented in Mustanski et al's study (Mustanski et al., 2007).

Logistic regression analyses were utilized to examine syndemic tenet two which was fulfilled through the presentation of the positive statistically significant relationships

between the independent and dependent variables on the bivariate (unadjusted odds ratios) and multivariate levels (adjusted odds ratios). These salient findings are also demonstrated by other syndemic studies (Singer, 2009; Stall et al., 2003; Mustanski et al, 2007; Senn et al., 2010). Over 50 % of the sample participated in other sex work in addition to adult film which increased their odds of substance abuse (as indicated by increased odds of binge drinking, cocaine use, and methamphetamine use) and depression on both bivariate and multivariate levels which highlights the interplay between utilizing drugs of solace (cocaine, alcohol, and methamphetamine) to cope with the suffering of depression (Singer, 2009). Individuals who endorsed participation in other sex work may also have an increased number of sexual partners than adult film actresses who do not participate in other sex work which may subsequently increase their HIV/STI risk. Participants with increased number sexual partners in the personal life were associated with enlarged risk of substance abuse (as indicated by increased odds of marijuana, cocaine, and methamphetamines) and childhood sexual abuse emphasizing the reinforcing loop of individuals self-medicating to cope with the trauma of sexual abuse (Singer,2009) .

The decreased HIV/STI self-reported susceptibility may increase and individual's likelihood of participating in risk behaviors, and in this sample individuals with decreased self -reported susceptibility to HIV also had increased odds of endorsing depression (bivariate and multivariate levels) and childhood sexual abuse. The interplay between decreased HIV susceptibility, depression and childhood abuse is also paralleled in Safren et al., (2011) and Stall et al's(2003) studies. Singer also notes that individuals who have experienced childhood sexual abuse are more likely to biologize (translate the

childhood traumas into adverse physical/mental ailments) childhood sexual abuse traumas may become expressed through depression (Safren et al, 2011; Singer, 2009; Stall et al., 2003). Actresses who experience the synergistic nature of both depression and childhood sexual abuse are also more likely to disagree that they are risk for HIV.

Multivariable logistic regression models were utilized to inspect Syndemic tenet three which was fulfilled through the multivariate analysis of the relationship between the independent count variable, syndemic and dependent variables (personal sex number, other sex work, and HIV risk). The syndemic variable was statistically related to all three of the dependent variables (HIV risk, personal sex partner number, and participation in sex work in addition to adult film. For instance, for each addition of a psychosocial problem an individual who endorsed low self -reported susceptibility to HIV Risk has 1.62 increased odds of HIV/STI risk when compared to the referent group (individuals endorsed high self -reported susceptibility to HIV risk). Participants who are involved in other sex work than adult film have 1.60 increased odds with the addition of each psychosocial health problem when compared to the referent group (individuals who do not participate in other sex work) in the sample. Adult film actresses who have an increased number of sexual partners in personal life (four or more in a year) have 1.65 increased odds with the addition of each psychosocial problem than the referent group (actresses with 3 or less partners in their personal life). Mustanski et al. (2007) also found a statistically significant relationship between increased sexual partners and the syndemic among Men Who Sleep with Men (Mustanski et al., 2007).

Multivariable logistic regression models were utilized to inspect syndemic tenet four which examined effect size estimates of each psychosocial health problem

component in regard to each dependent variable. Tenet four was fulfilled by analysis of the dataset. Substance abuse noticeably increased odds of increased number of personal sex partners when compared to the referent group (actresses with less than four personal sex partners), which is mirrored by Stall et al's study which also reported that substance abuse greatly increased odds of multiple sex partners (Stall et al.,2007 p 41) . The childhood sexual abuse component of the syndemic considerably increased odds of low self -reported susceptibility to HIV risk as compared to individuals with high self - reported HIV susceptibility. Lastly, depression augmented odds of actresses who participated in other sex work. A summary of the quantitative findings is presented in Table 12 below.

Despite, the quantitative phase of this study providing an expansive view of how psychosocial problems are associated and work additively in a system to increase HIV/STI risk among adult film actresses these results fail to discuss the underlying social processes and occupational cultural norms which may fuel the syndemic. Moreover, the findings do not address how power imbalances between actresses and their supervisors (directors and distributors) may work to increase HIV/STI risk among this population. Deeper understanding of how social factors facilitate the syndemic system, and increase prevalence of the psychosocial problems in the syndemic in this population is crucial to understanding the entirety of the adult film actress syndemic. Finally, it is also critical to examine the influence of the psychosocial problems in these women's everyday lives and understand alternate pathways through which HIV/STI risk is perpetuated in the population. For the purpose getting a more detailed view of how HIV/STI risk functions

in the everyday lives of adult film actresses the quantitative strand was followed by the collection and analysis of ethnographic data.

Table 12

Summary of Quantitative Findings by Syndemic Tenet

Hypothesis (Tenets)	Statistical Procedure	Purpose	Tenet Fulfilled?	Product	Removed Variables
1. The psychosocial problems (depression, childhood sexual abuse, intimate partner violence, substance abuse) are closely associated with each other	Chi Square Test with Mantel- Haenszel Odds Ratio	Examines the relationships between IV's)	**Yes**	**15 of the 36** calculated unadjusted OR's were statistically significant, which suggest that the psychosocial problems are closely associated.	
2.The psychosocial problems are positively and significantly related to the outcome variables	PROC Logistic with statistically significant controls determined by Chi Square tests between control variables and IV's	For each logistic regression model utilizes DV's and IV's to assess the relationship between each separate IV(syndemic component with DVs and statistically significant controls	**Yes**	DV's with stat sig OR's **HIV Risk**,**Other Sex Work, PersonalSexNo** AOR**HIV Risk Other Sex Work PersonalSexNo**	Adult Sexual Abuse
3.The psychosocial problems work synergistically in a system, consequently when psychosocial problems are combined into a scored variables (0-4) and will positively and significantly related to outcome variables	PROC Logistic with syndemic scored variable and DV's and statistically significant controls with scored syndemic variable	Examines the relationship between the syndemic system defined in tenet 2 and DV's (personal sex number, other sex work, and HIV risk) and IV→ scored	**Yes**	Statistically significant odds ratios suggest an additive synergistic relationship between the syndemic variable and increased odd of HIV/STI risk as represented by **self -reported HIV risk ,Other Sex Work**, and **Personal Sex Number**	

		syndemic variable and statistically significant variable			
4.With the addition of each psychosocial problem, the odds of each outcome variable will increase (i.e. odds for syndemic 3 will be lower than odds for syndemic 4 on any given outcome variables).	PROC Logistic DV's with syndemic 2(two psychosocial problems), syndemic 3, syndemic 4 as IV's and stat sig controls	Examine the relationship between the deconstructed syndemic variable and the DV's	**No**		
5. All psychosocial problems do not share equal importance with each dependent variable. Some psychosocial problems amplify odds of HIV/STI risk more than others	PROC Logistic DV's and each IV entered in to each model	Examine the importance of each component of the syndemic with each DV	**Yes**	Substance abuse →increased personal sex partners CSA→ increased self-reported HIV susceptibility Depression →odds of participation sex work other than adult film	

Phase II: Qualitative Findings.

The qualitative portion of this study displays how issues that seem unrelated like social marginalization, tenuous romantic relationships and the increased prevalence of intimate partner violence, childhood traumas, mental health issues, and rape are connected through complex pathways that increase HIV/STI risk among adult film actresses. The qualitative data examined the psychosocial health domains, the processes that undergird HIV/STI risk, and the context that perpetuates the AFI actress syndemic. The addition of ethnography to multivariate logistic regression analyses played a vital role in providing a more comprehensive understanding of critical social factors that promoted increased HIV/STI risk among AFI actresses. Interestingly, the addition of qualitative inquiry also provided information about the heterogeneity of factors that amplify HIV/STI risk among these women. Further, the addition of ethnography

elucidated information about how issues in the political economic context fuel the asymmetric burden of STI seropositivity among actresses through decreasing the likelihood of condom use in their occupational lives and increasing the likelihood of their participation in risky rough sex in order to receive increased economic benefits. Syndemic theory also reveals how issues of hegemony (the powerful group imposing their power on the marginalized) work to facilitate increased rates of substance abuse, psychological distress (bipolar disorder, depression), rape, childhood trauma, which form a syndemic.The syndemic functions to lower the overall health profile of adult film actresses and fuel the epidemic of Sexually Transmitted Infections. For example, adult film actresses who experience one psychosocial issue are more likely to experience another, and previous studies suggest that individuals who experience childhood sexual abuse are more likely to be raped as adult (El Bassel et al.,2001; Romero- Daza et al.,2003). Furthermore, with the addition of each psychosocial problem, individuals are more likely to be involved in intimate partner violence relationships due low self-esteem and mental illness (both products of childhood trauma and adult rape), and are less likely to negotiate condom use, thereby and increasing their HIV/STI risk (Romero Daza et al., 2003; Gonalzez- Guarda et al., 2011; Singer, 2009)

Drug use, intimate partner violence, adult sexual abuse, childhood sexual abuse, mental distress, and HIV/STI risk often work in a reinforcing loop to form a syndemic. The AFI actress syndemic is also facilitated by the power structure of the AFI, hegemony, and rapid spending habits. The ethnographic data also clarified how the psychosocial problems become embodied. For instance AFI actresses confirm that many individuals who survived traumatic childhood experiences were more likely to self-

medicate through drugs and participate in riskier sexual acts to sponsor their substance use habit. The ethnographic data also provided information on how the political economic context constrained condom use and facilitated the AFI syndemic. More specifically, rapid spending habits were often perpetuated by drug use and AFI actresses' need to continue either drug use. AFI actresses' need to continue conspicuous consumption also increased HIV/STI risk through perpetuating their participation in more risky sexual acts to earn increased economic capital. Hegemony and power structure constrained condom use and the producer's and distributor's disdain for condom use contoured the non-condom use behavior of AFI actresses.

Ethnographic data also highlighted relationships between psychosocial health problems revealed in the quantitative phase. One salient issue included AFI actresses' use of drugs of solace (alcohol, cocaine and methamphetamines) to alleviate the suffering from mental illness. Another salient quantitative relationship emphasized in the qualitative data included the discussion of how drug use often triggers and perpetuates intimate partner violence (Singer, 2009; Guarda -Gonzalez et al, 2011). According to the qualitative findings, a large amount of women in the industry experienced childhood abuse, which amplified their odds of using substance abuse to cope with childhood traumas, co-occurring mental health issues, and the occupational pressure of participation in the adult film industry(Singer,2009;Grudzen et al.,2008). The role as an adult film actress may also worsen the women's mental health profile, consequently increasing the likelihood that they spend money quickly to cope with their occupational pressure. Women with mental health issues and rapid spending habits may also become more vulnerable to increased HIV/STI risk through performing in more extreme scene types.

The aforementioned process may continue repeatedly, which may decrease an actresses' likelihood of being able to combat the retrogressive dynamic which causes them to film even more extreme scenes than previously shot at a greater quantity. Participation in extreme films may augment AFI actresses' HIV/STI risk to a greater extent due to increased occurrence of more extreme unprotected sexual events. The boost in both scene type extremity and quantity may devalue the actress in the industry, thus causing her to become "shot out" and lose all opportunities in the industry, leading her to go to more risky sex work, which includes street prostitution or escorting, whereby the risk for syndemic components increases to an even larger degree (Romero Daza et al.,2003; Grudzen et al.,2009; Escoffier,2007; El Bassell et al., 2001) . The data also revealed that a synergism between douching and the unequal power differentials between actresses and directors may exist because directors prefer that women douche before scenes so that they know that the actresses are cleaner (Tsai et al.,2009). The qualitative findings contextualize the preparation of douching by showing how the ritual is not merely an individual decision, but instead may be requested by directors on set, and also directly intersects with desires of the powerful in the industry. Moreover, the relationship between douching and HIV/STI risk is not merely explained by women desiring to have cleaner sexual organs, but is also influenced by director's desire for women to douche. Additionally, according to the ethnographic data, actresses who participate in substance abuse may also be at increased likelihood to douche and enhance their HIV/STI risk. Douching increases HIV/STI risk through eradicating advantageous "peroxidase producing lactobacilli" which safeguard against internal and external "pathogens" and

augment the likelihood of acquisition of sexually transmitted infection and HIV (Tsai et al., 2009 p 2).

The political economy of the condom refers to how an actresses' request to use a condom on set may limit her economic possibilities in the industry. This theme also highlights how many women merely see not using a condom as normative due the hegemony of directors and distributors favoring films without condoms. AFI hegemony also provides an understanding as to why the majority of actresses do not question the *no-condom* norm. Only two women in the qualitative sample utilized condoms in their personal life, so the non-protective sex behaviors often resonate in the personal sex lives of AFI actresses, subsequently increasing HIV/STI risk in both the occupational and personal spheres of their sex lives. Salient ethnographic findings emphasized how power and hegemony directly relate to the lack of condom use in the industry and the occupational culture norms also spill over into women's personal sex lives.

Findings from phase II also revealed how processes of power differentials fuel and undergird the intersections between the syndemic of psychosocial problems (drug use, mental health issues, intimate partner violence, traumatic childhood experiences, and rape) and highlighted the complex interaction between components of the syndemic. Most individuals in this phase of the study experienced multiple issues in the syndemic simultaneously. The interplay between the psychosocial problems, increased HIV/STI risk, and salient social processes emphasized in the qualitative findings are of great import because they provide a comprehensive picture of how occupational risk is embodied in the everyday lives of AFI actresses'. Six of the women in this phase noted that they came from dysfunctional, impoverished homes and two experienced domestic

violence as children. Ethnographic findings corroborate Singer's explanation that childhood traumas are biologized and also structure future behavior (Singer, 2009). Accordingly, individuals who experience the previously mentioned criteria have a decreased likelihood of observing efficacious relationships in childhood which may cause them to experience deficiencies in trust in romantic relationships. Unequal power distributions between directors and actresses may increase the likelihood that the AFI actress may adopt the survival tactic of a tough personality which may concurrently increase the difficulty of finding and maintaining romantic relationships and lower quality of life (Singer, 2006 p 2019).

This portion of the study also reveals that participation in extreme scene type is integral in augmenting drug use and HIV risk. For instance, there are multiple accounts in the data that show that AFI actresses use drugs to manage the physical and emotional trauma that often results from extreme scenes (Escoffier, 2007). Individuals also utilized drugs to recover from scenes. The bidirectional relationship between drugs and scene type may also be fueled by spending habits which often lead to women spend their money on drugs and the consumption of brand name goods, causing their money to dry up quickly (Grudzen, 2008). To prevent going into debt, actresses may begin to do more extreme films to make more money to sustain their quick spending habits, consequently increasing the likelihood of physical trauma from rough scenes and HIV/STI risk. The retrogressive dynamic and power structure components of the political economic context and less tough personality type may also interact to increase AFI actresses' HIV/STI risk because women who are less likely to speak up for themselves may be more vulnerable to being coerced into doing more extreme film types, thereby increasing the HIV/STI risk

(Grudzen et al., 2009). Women who are in the industry may be at increased biological risk due to consistent infection, co-infection, and reinfection of STIs which increase vulnerability to gynecological issues, including pelvic inflammatory disease, infertility, and HIV infection.

Although the components of the syndemic, including political economic forces, continue to constrain condom use and negotiation as well scene type in the participant's daily lives, women in the industry find ways to exercise their agency. Many women employ protective strategies, which include becoming cognitively tough, doing research on companies before shoots, and using physical or verbal cues to stop painful sex during scenes, as tools to employ their agency. These strategies also assist women in combating the challenges of the syndemic that they face. Survival tactics increase the likelihood that some actresses thrive in the industry (Romero-Daza et al., 2003). The survival and protective strategies show that these women are not victims of their syndemic, but instead use their savvy and close relationships with their colleagues to decrease their HIV/STI risk. Qualitative findings support the development of an intervention that addresses culturally specific issues including power and hegemony, financial planning, psychosocial counseling and consistent reinfection of STIs in this marginalized population.

Section II: Integration of Quantitative and Qualitative Data

The content in this section will mix the salient findings from both quantitative and qualitative strands to provide a comprehensive understanding how the AFI actress syndemic function to increase HIV/STI risk in this population.

Mixed Method Objective and Research Questions

The figure below provides a summary of the Transformative Sequential Explanatory Mixed Methods study design, which consisted of a quantitative strand(multivariate logistic regression) followed by a qualitative strand (ethnography).

Phase I	Phase II		Integration
QUAN →	Ethnographic Instrument	QUAL→	Interpretation
Analysis of Secondary Data through Chi Square and Logistic Regression	Informed by Salient Quantitative Findings	Online Observation And Individual Interviews	Data Connection Phase II enriches and supplements quantitative findings

Figure 9. Visual Summary for the Transformative Sequential Explanatory Mixed Methods Design.Adapted from M.J.Hylok, 2011, Exploring Student Perceptions to Explain the RelationshipBetween Physical Activity and Academic Achievement in Adolescents:A Mixed Methods Study Digital Commons at University of Nebraska, p 83.

As stated in the figure above, this study aimed to explore the sociocultural, political economic, and behavioral factors that amplify HIV/STI risk among women in the Adult film industry through performing a quantitative strand (phase I) and qualitative strand (phase II) of research. This research utilized the transformative explanatory sequential mixed method study design which placed equal weight on both methodological strands. The quantitative logistic regression analyses of the study and utilized the qualitative interviews to expand and explain statistically significant quantitative findings. The quantitative phase provided a broad perspective on the

relationships between the set of psychosocial problems and indicators of HIV/STI risk among these women. The addition of ethnography to logistic regression findings provided a more nuanced view of the sociocultural context where the syndemic transpires and the processes that fuel the syndemic in the everyday lives of these women. The qualitative findings also aided in the construction and adjustment of the syndemic picture in the sociocultural context (Cresswell & Plano-Clark, p 386).

This study bridges tenets and elements of both quantitative and qualitative studies on syndemics, consequently providing a more comprehensive picture of the female adult film stars syndemic. Both qualitative and quantitative findings emphasize the importance of synergism between the social, psychological, biological, and political- economic components to increase HIV/STI risk in this population. Although a significant amount of public health studies continue to solely discuss the internal and external Microsystems of risk to explain the health disparity of increased HIV/STI risk among AFI actresses, this study examined how the common exposures of depression, childhood sexual abuse, intimate partner violence, and substance abuse work together in a system to increase HIV/STI risk in the marginalized population of female adult film stars. As noted in Figure 10 below, the quantitative strand elucidates relationships in the internal and external mircosystems of HIV/STI risk. The qualitative strand explores all of the systems of HIV/STI risk listed in the figure below.

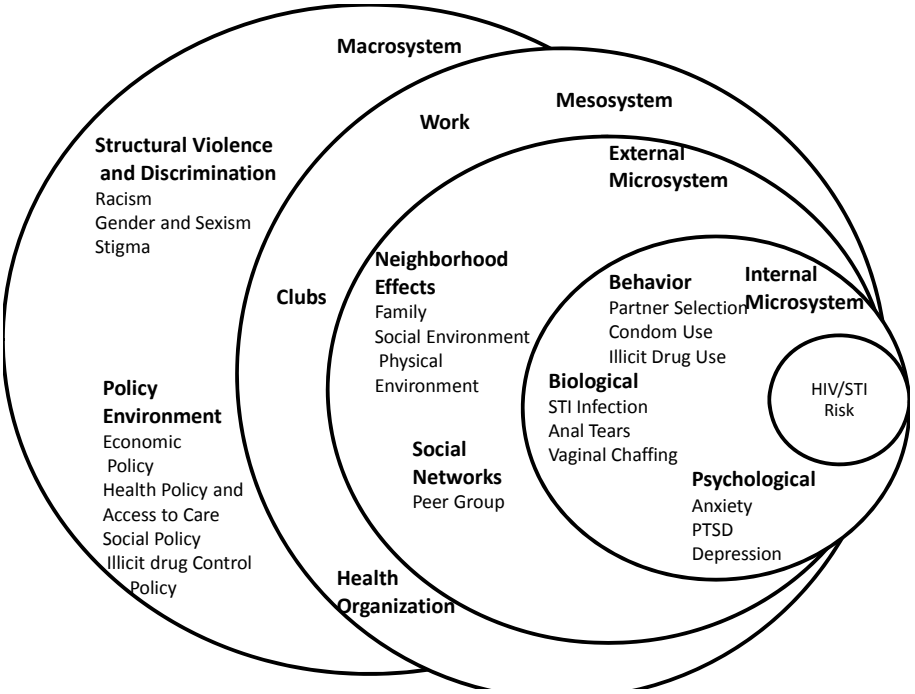

Figure 10.Abridged Heuristic Model of the Ecosocial Perspective

Note. Unlike figure 3 this figure only discusses pertinent aspects of the ecosocial perspective discussed in this study.

The quantitative portion of this study defined the additive relationship between the syndemic variable and HIV/STI risk. The qualitative portion of the study went on to further explain how the quantitative findings were embodied in the lives of AFI actresses, and explored critical social factors which facilitated the AFI actress syndemic.

Mixed Methods Question 1.How does the addition of ethnography confirm, disconfirm, expand, and/or contextualize quantitative findings?

The qualitative findings also expand the quantitative findings by elucidating the heterogeneity of actresses' relationships with the meso level healthcare organization AIM, and experiences with STIs. More explicitly, the qualitative data corroborates Goldstein et al's (2011) findings of Chlamydia and Gonorrhea being the most common

STIs, and the likelihood of the co-infection of both STIs. Furthermore, the respondents' recommendations of providing a more extensive test panel and testing at additional sites (oral and anal) to decrease likelihood of Chlamydia or Gonorrhea infections also parallel Goldstein et al's recommendations for the industry. The experience with STI seropositivity goes beyond the quantitative inquiry which emphasized perceived HIV/STI risk and testing behavior and evaluates the occurrence of STI serpositivity and the situations that surround Gonorrhea and Chlamydia infection. The ethnographic phase also contextualizes how the syndemic increases HIV/STI risk. For instance it shows how multifaceted issues including rapid spending patterns, the power structure and function of hegemony, and childhood traumas work synergistically to increase HIV/STI risk in this population. Table 13 illustrates the connection between the findings the logistic regression analyses and qualitative interview data.

Table 13

Connection of Logistic Regression Findings and Ethnographic Interviews

Hypothesis (Tenets)	Statistical Procedure	Purpose	Tenet Fulfilled?	Removed Variables*	Ethnography
1. The psychosocial problems (depression, childhood sexual abuse, intimate partner violence, substance abuse) are closely associated with each other	Chi Square Test with Mantel-Haenszel Odds Ratio	Examines the relationships between IV's	**Yes**		**Substantiates** the interrelations between IV's **Expands** the mental health domain
2.The psychosocial problems are positively and significantly related to the outcome variables	PROC Logistic with statistically significant controls determined by Chi Square tests between control variables and IV's	For each logistic regression model utilizes DV's (in separate models) and IV's to assess the relationship between each separate IV(syndemic component with DV's and statistically significant controls	**Yes**	Adult Sexual Abuse	**Confirms** the relationships between drug use , mental illness , intimate partner violence and HIV/STI
3.The psychosocial problems work synergistically in a system, consequently when psychosocial problems are combined into a scored variables (0-4) and will positively and significantly related to outcome variables	PROC Logistic with syndemic scored variable(ranges from 0-4 with each endorsement of a psychosocial problem add 1 to the syndemic score) and DV's and statistically significant controls with scored syndemic variable	Examines the relationship between the syndemic system defined in tenet 2 and DV's and IV→ scored syndemic variable and statistically significant variable	**Yes**		**Confirms** Kylie who qualitatively endorsed substance abuse), perpetrated Intimate Partner Violence, expereienced mental illness (panic attacks),and childhood sexual abuse reported the most sexually transmitted infections (10)

4. With the addition of each psychosocial problem, the odds of each outcome variable will increase (i.e. odds for syndemic 3 will be lower than odds for syndemic 4 on any given outcome variables).	PROC Logistic DV's with syndemic 2(two psychosocial problems), syndemic 3, syndemic 4 as IV's and stat sig controls	Examine the relationship between the deconstructed syndemic variable and the DV's	**No**		Cannot be confirmed or disconfirmed
5. All psychosocial problems do not share equal importance with each dependent variable. Some psychosocial problems amplify odds of HIV/STI risk more than others	PROC Logistic DV's and each IV entered in to each model	Examine the importance of each component of the syndemic with each DV	**Yes**		Cannot be confirmed or disconfirmed

Mixed Methods Question 2: What are the most prevalent HIV/STI risk behaviors of the women in AFI?

According to the table below which references the quantitative dataset, the most prevalent risk behaviors in the industry are depression, childhood sexual abuse, intimate partner violence, and substance abuse. Table 14 shows how substance use is the most prevalent psychosocial health problem in the AFI actress syndemic, followed by childhood sexual abuse, intimate partner violence, and rape. The process of these psychosocial health problems working together to additively enhance HIV/STI risk defines the AFI actress syndemic.

Table 14

Prevalence of Independent Psychosocial Problems

Independent Variables(Psychosocial problems)	
Adult Sexual Abuse (Rape). (%)	34 (26.7)
Childhood Sexual Abuse. (%)	48 (37.2)
Intimate Partner violence, prior 12 months No. (%)	46 (34.3)
Substance Abuse (%)	99(75%)
Depression (%)	43(33%)

a. What are the processes found in the qualitative data that increase HIV/STI risk?

Table 14 provided information on the nature of the AFI actresses syndemic, and the addition of ethnography to phase I contextualizes the syndemic system. The processes of power and hegemony function to constrain condom use in the industry and increase HIV/STI risk. Another salient finding in the qualitative data is the mechanism by which participants' use of drugs of solace as tools to cope with social suffering as indicated by psychological distress (panic attacks, depression, and bipolar disorder), intimate partner violence, childhood sexual abuse, and rape(Singer,2009). Numerous studies discuss how drug use increases the likelihood for individuals to participate in risky sexual behavior (El Bassel et al., 2011;Romero Daza et al., 2003:Senn et al.,2010;Stall et al.,2003) The way in which frivolous spending habits that are prevalent among female adult stars may increase a actresses likelihood of engaging in more extreme scenes (increased HIV/STI risk) on camera in order to fuel her rapid spending may decrease the actresses' worth in the industry and accelerate the retrogressive dynamic (Escoffier,2007).

Mixed Methods Question 3: What are the components of the full syndemic for women of the AFI?

Figure 11 below shows how neither quantitative nor qualitative findings completely explain the intersecting, reinforcing epidemics found in among adult film actresses. Each phase serves a critical purpose (Cresswell &Plano-Clark, 2011 p 387). The quantitative findings investigate the relationship between psychosocial health problems and HIV/STIs to form the syndemic but do not explain what other political economic factors of the theory fuel the system. The qualitative findings provide additional information on aspects of the occupational culture that constrain condom use and negotiation and perpetuate participation of actresses in more extreme scenes, but fail to address the additive nature of the AFI actress syndemic. The quantitative phase provides the definition of the majority of the syndemic system while the main purpose of the qualitative work is to explain the narratives and mechanisms behind salient statistical findings (Cresswell &Plano-Clark, 2011 p 387). Regardless of the increased proliferation of syndemic studies on marginalized populations ranging from incarcerated men of color to street level prostitutes to Young Men Who Sleep with Men, no studies have taken a mixed methods approach to defining a syndemic and the context that fuels and shapes HIV/STI risk.

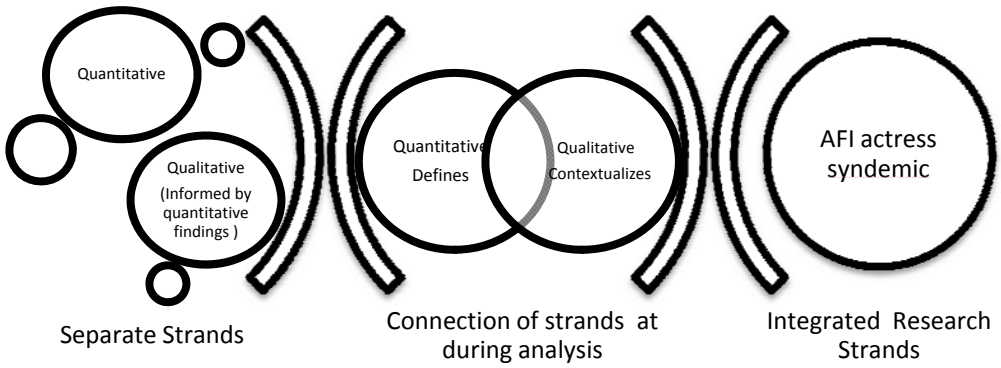

Figure 11.Defintion of the AFI actress syndemic by methodological strand

Section III: Limitations

The limitations of this study include the small sample size when compared to other studies that quantitatively explored syndemic theory. This thesis also has a significantly smaller number of observations than other studies. For example, both Senn et al. (2010) and Stall et al. (2003). have over a thousand observations each, and Mustanski et al. (2007) have over three hundred observations, which is three times the observations in this study's quantitative dataset. Smaller sample size may decrease the statistical power and the researcher's ability to apply the findings from the study's quantitative sample to the larger population of adult film actresses (Hosmer & Lemeshow, 2000). Moreover, participants were purposefully selected according to their participation in sexual activity in adult films instead of randomly selected from a pool of available AFI actresses which may also limit this study's generalizability(Hylok, 2011 p 10). Quantitative research in this population is quite new, and the reliability and validity of multiple measures namely, the participation in other sex work, has not been tested or utilized in other studies which may make it difficult to understand the connection

between the aforementioned dependent variable and HIV/STI risk in this population. The quantitative data is cross -sectional rather than longitudinal, so statistically significant findings represent correlations, and thus, causality cannot be inferred.

Both qualitative and quantitative data were self-reported, so responses from participants may differ for their actual behavior (Hylok, 2011 p 10). The researcher's role as a student may have prevented the participants from being completely forthcoming about their participation in drug use or any other controversial activities. Lastly, the use of the theoretical lenses of ecosocial and syndemic theories may have excluded important themes related to HIV/STI risk among AFI actresses that were not traditionally addressed in the previously mentioned theories.

Section IV: Implications for Public Health Education, Research, Policy and Research and Calls to Action

Findings from this inquiry have critical implications for public health education, research and policy. This mixed methodology study provided critical information on the synergy between prevalent psychosocial health problems and augmented HIV/STI risk among this marginalized population. The following subsections will address how these findings influence public health education, research and policy.

Public Health Education and Intervention Development.

Salient findings from this study suggest that the interrelation between health problems and political economic context amplified HIV/STI risk among adult film actresses. Relevant findings can be utilized to drive culturally relevant interventions that promote collaboration between researchers and adult film actresses. It is critical that any

intervention for this population harness the insider knowledge of AFI actresses and allow this information to drive any intervention aimed at decreasing HIV/STI risk among AFI actresses. Future public health interventions must also go beyond merely emphasizing condom use and work to emphasize additional culturally relevant risk reduction methods including instructing actors to orgasm on the stomach, breasts or neck rather than of the more risky anatomical sites of the mouth, anus or vagina of the female performer, as well as, continued promotion HIV/STI testing.

Future public health programming must also endorse the idea of the performers having an active rather than passive role in their sexual health in both their occupational sex lives and personal sex lives to reduce HIV/STI risk in both contexts. Further, public health programming should employ community based participatory research (CBPR) techniques to include AFI actresses in creating a solution to HIV/STI risk. Moreover, public health education efforts should utilize a combined ecosocial and syndemic approach to tackle multiple problems with one multipronged intervention. The CBPR intervention must also tackle issues of economic struggles among AFI actresses including limited occupational opportunities. Provision of employment opportunities may decrease HIV/STI risk by decreasing the likelihood that AFI actresses will participate in increasingly risky sex work activities. The future intervention must also utilize the actresses' knowledge to drive HIV/STI prevention methodologies which work in the AFI's cultural context; likewise, making the AFI actresses an integral part of the intervention will also increase the likelihood that the intervention will acknowledge the interplay between political economic, sociocultural, and biological issues.

Prospective interventions should also allow the AFI community assets (sexual knowledge and creativity) to shape intervention activities. Future interventions must focus on using the community assets to counter HIV/STI risk instead of use traditional intervention development methodologies which focus on decontextualized risk and community deficits (Herrick, 2011 p 95). For instance, more culturally relevant interventions must utilize strengths based programming which emphasizes creating strong, positive social networks, increasing self-monitoring and promoting eroticized safe sex among AFI actresses (Herrick, 2011 p 95). Improved interventions will decrease HIV/STI risk and other psychosocial health problems and augment the quality of life of AFI actresses (Herrick, 2011 p 95).

Public Health Research.

It is critical that future studies continue to standardize the definition and terms associated with syndemic theory in order to increase the clarity and rigor of future syndemic literature. Future studies can clarify and refine syndemic theory through the development of a syndemic toolkit which details the core elements of syndemic in the most pragmatic, clear language possible. The creation of the syndemic toolkit will increase accessibility to clearly defined principles of symdemic theory and promote the increased uptake and use of the theory by more researchers and community based organizations (Singer, 2009). Intervention development literature should also work to develop papers which provide clear instructions of how syndemic theory influences intervention design to increase the likelihood that public intervention designers will adopt the theory.

Future studies on women in the AFI should utilize syndemic theory, the ecosocial model, and models similar to the PEN-3 model and/or transformative research methodologies, which harness the power of the assets, resilience, and strengths of communities to promote sustainable behavior change. Potential studies should also be longitudinal and interdisciplinary to explore the multifaceted social, psychological, and biological risks in the vulnerable population. Studies with larger sample size are needed to increase the generalizability of information on present issues of AFI actresses, which include the complications from HIV and repeated STI infections. Lastly, future studies must work to identify the possible association between increased likelihood of mental illness, gynecological, and oral and anal cancers in this vulnerable population.

Public Health Policy.

There is an ongoing public health policy debate occurring in California; on one side of the debate is the AIDS Healthcare Foundation, The Pink Cross Foundation (Christian non-profit which works with AFI actresses), Cal-OSHA and other public organizations , and on the other side of the debate is the AFI. The debate is centered around the AIDS Healthcare Foundation suing Los Angeles public health officials to force enforcement of Cal- OSHA's blood borne pathogen policy which makes employers responsible for the protection of their employees against blood, semen or vaginal fluids, and consequently makes condom use mandatory in the AFI industry (AIDS Healthcare Foundation,2011;APHA, 2011). Producers, distributors, and some talent (AFI actresses and actors) detest condom use due to the belief that adult-film consumers watch films to vicariously participate in sexual fantasies and condoms ruin the sexual fantasy and will

consequently destroy the AFI (Grudzen & Kerndt, 2007) . Widespread condom use is a sure way to decrease HIV/STI risk among the AFI talent, but the enforcement of condom use may force the AFI to move elsewhere and continue profitable business as usual. This inquiry advocates for pragmatic policy development based on the insider knowledge of AFI actresses. Prospective policies must simultaneously address the fears (decreased profit) of the powerful in the AFI industry and promote condom use. The idea is to concurrently increase AFI profit and safety of AFI talent. This research suggests the use of a partnership between condom companies and AFI distribution companies; the suggested partnership would allow the AFI to advertise condoms in the films consequently increasing profit while protecting AFI actresses. The possible partnership between the AFI and condom companies would mirror the partnership between the Center for Sexual Health Promotion and Dwight and Church corporation (parent company of Trojan Condoms) formed by Michael Reece and the Center for Sexual Health Promotion at the University of Indiana Bloomington (Center for Sexual Health Promotion, 2011). The partnership would benefit all parties involved by increasing profit by simultaneously increasing safety. Policy creation could also incorporate an academic-community interdisciplinary team of adult film actresses, producers, distributors, physicians, and social scientists, in addition to, public health practitioners and advocates, who would work together to promote condom use, ensure ethical treatment of talent in the AFI, create prevention strategies to decrease adverse effects of the AFI syndemic, and create future career opportunities for AFI talent. These policy suggestions could possibly end the policy war and partner the AFI community and public health organizations to promote the integrated goal of increasing AFI talents' safety and profitability.

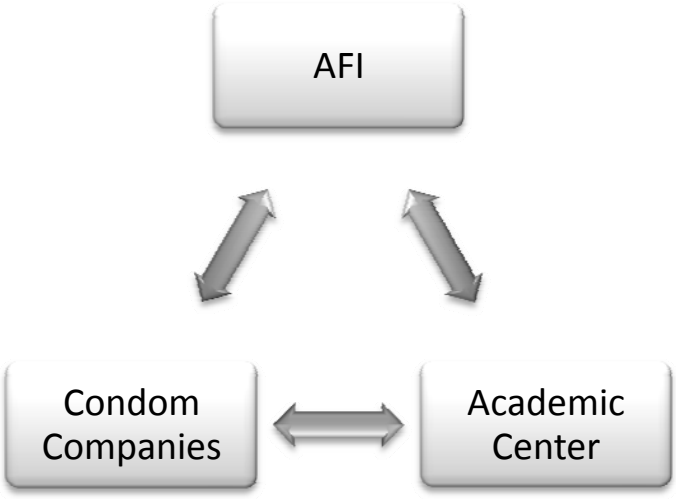

Figure 12. Proposed partnership between the AFI, Condom Companies, and Academic Center

The partnership detailed in the figure above could also use adult film as a conduit to eroticize safer sex to an audience of billions, consequently decreasing HIV/STI risk of the larger population. Moreover, the suggested partnership could be the catalyst for the formation of other partnerships with sexual health organizations namely American Association of Sexuality Educators, Counselors and Therapists (AASECT) to create a training program for former Adult Film actresses to become sexual health educators; consequently, increasing the sexual health workforce and providing career choices outside of sex work for former AFI actresses.

Calls to Action.

AFI actresses face a series of challenges, including high prevalence of intimate partner violence, mental illness, substance abuse, and childhood sexual abuse, which work synergistically to amplify HIV/STI risk. This study suggests the creation and implementation of a community based intervention and condom company-AFI-academic

coalition partnership to decrease HIV/STI risk and social inequities experienced by AFI actresses. The three following calls to action are based on salient findings from this study.

1. An increase in syndemic studies with AFI actresses which refine the pathways and interplay between HIV/STI risk factors with larger sample sizes to increase generalizability.
2. Additional syndemics studies which address other prevalent social inequities (namely racism) which have been suggested to cause more adverse health outcomes in marginalized populations.
3. Additional CBPR syndemic driven intervention which employ AFI actresses, and work to address the multifaceted interacting epidemics this populations faces.
4. The formation of partnerships between AASECT (or other sexual health organizations), the AFI, condom companies, and academic centers which collaboratively promote the development of pragmatic HIV/STI prevention and policy based on the needs of the AFI talent.

Section V: Dissemination and Conclusion

The findings of this study will be disseminated to the AFI actresses, non-profit organizations, and health educators through the creation of a website. The first tab on a website will provide the salient results of this inquiry in clear language. When the website is created, the URL will be tweeted, placed in a Facebook status, and direct messaged to all participants for two consecutive weeks. The second tab on the website will be tailored to health educators and connect salient findings to possible intervention

and partnership development strategies. The third tab on the website will be tailored toward policymakers and coalesce policy recommendations from the APHA, AIDS Healthcare Foundation, and other entities, and discuss how salient findings should shape future policy endeavors. The findings will be disseminated to the academic community through academic journals, online through a one page pdf document that will be distributed to prominent public health bloggers, and the URL of the pdf will also be tweeted to prominent public health organizations, including the Centers of Disease Control and Prevention, OSHA, Cal-OSHA, National Institutes of Health, and other organizations that target reproductive and sexual health.

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Appendices

Appendix A: Glossary

Culture *–" the dynamic fluid patterned process which indicates how individuals use their (conscious and unconscious) assumptions, expectations, knowledges and practices to manage their outside world and respond to their societal contexts of people making sense of their world as they are called upon to do so" (Burke et al.,2009p 62S; Sanders,2004 p 558)*

HIV/STI risk*- A collective term which refers to the biological link between a positive diagnosis for a sexually transmitted infection/s increasing vulnerability for acquisition of HIV. In this thesis the term will be used to refer to how high prevalence of Gonorrhea and Chlamydia leads to subsequent increased HIV susceptibility (Goldstein et al., 2011; Kerdnt, 2008)*

Ecosocial *– A variant of the socio ecological model which takes into account the idea that social issues can become embodied as biological diseases. This theory is also one part of the expanded syndemic framework and was also utilized to organize components of syndemic theory (Kreiger, 2001)*

Syndemic- *"The syndemic approach offers a means of moving beyond a focus on prevention strategies dealing with proximate causes by drawing attention to the processes that create clusters of disease and noxious living conditions for particular populations"(Singer & Erickson 2011p 171). The term is focused on the interrelations between common social, psychological, cultural, and biological issues around disease clustering or amplified disease risk. For the purposes of this thesis, this term refers to the role of depression, childhood sexual abuse, intimate partner violence, substance abuse, social marginalization working in concert work in an additive system to increase HIV/STI risk. Moreover the term advocates for integrated prevention efforts that are informed by multiple social and health issues that decrease the health profiles of marginalized populations (Singer & Erickson, 2011)*

Embodiment - *A term that references that ability of social suffering to be translated into biological disease (Singer, 2009)*

Occupational Culture *- A term that references the mechanisms through which the powerful in an occupation coordinate and synchronize behavior of employees, and the set of norms and behaviors that dictate acceptable political and economic capital transactions (Padilla,2008)*

Risk - *Measure of vulnerability or increased odds of disease acquisition which can be the product of the interplay and negotiation of individual choice, disease status, lack of power; in addition to, the understanding that the interplay and negotiation is also positioned in the social context which is affected by power relations (Sanders, 2004 p 538; Rhodes)*

Retrogressive dynamic *-Component of occupational culture in the Adult Film industry in which an actress's value and career longevity in the industry is determined by the woman decreasing the severity of scene type (see scene hierarchy) and quantitative scenes to remain viable in the Adult film industry*

Psychosocial Health Problems- *A term that collectively refers to depression, intimate partner violence, childhood sexual abuse, and substance abuse.*

SAVA Syndemic- *The original syndemic which examines the interplay and additive relationships between substance abuse, violence, and HIV/AIDS (Singer, 2009).*

Scene Hierarchy- *In the Adult Film Industry scene type, HIV risk, and economic benefit are related. This term refers to the rule in the industry that allows actresses to receive increased pay for scenes that are more extreme in terms of physical and HIV/STI risk. For example women are paid the least for scenes that do not involve penis penetration (lesbian and masturbation scenes) and the most for double penetration (simultaneous insertion of two penises into one actress)*

Structural Violence- *This term refers to the unjust macrolevel forces which arrange imbalanced access to resources and may engender "social, emotional, and physical conditions that invite and sustain drug dependency" and negative health effects including but not limited to mental illness (Singer,2001 p204,205)*

Transformative explanatory sequential mixed methods design- *A mixed methods study design which involves a quantitative phase followed by a qualitative phase which aims to promote improve quality of life for marginalized populations. This type of study design also connects or integrates data through interpretation of data, and recommends calls to action promote social justice in the study population. (Creswell & Plano-Clark,2011; Mertens,2008)*

Appendix B: Quantitative Information

Table 1B

Characteristics of Adult Performers versus California Women 18-40 years old+

Characteristic	Adult Performers (N=134)	California Women (N=1,773)	*P* value
Age, mean (SD)	27.8 (7.4)	31.3 (5.9)	<.01
Hispanic, No. (%)	18 (14.2)	908 (51.3)	<.01
Race/Ethnicity, No. (%)			<.01
White	84 (73.0)	1453 (81.9)	
Black	21 (18.3)	124 (7.0)	
Asian	4 (3.5)	113 (6.4)	
Native Hawaiian/Pacific Islander	1 (0.8)	27 (1.5)	
American Indian/Alaska Native	5 (4.6)	56 (3.2)	
US-born, No. (%)	114 (85.1)	992 (55.9)	<.01
Any College, No. (%)	78 (60.9)	872 (49.2)	.01
Married, No. (%)	25 (18.6)	1068 (60.2)	<.01
Annual Income, No. (%)			<.05
<$25,000	69 (51.5)	1068 (60.2)	
≥$25,000	65 (48.5)	705 (39.8)	
Employment Status, No. (%)			<.01
Employed	93 (74.4)	945 (53.4)	
Unemployed, Trying to find work	14 (11.2)	121 (6.8)	
Unemployed, Not trying to find work	18 (14.4)	705 (39.8)	
Poverty*, No. (%)	67 (50)	643 (36.3)	<.01
Any alcohol, past month, No. (%)	99 (74.4)	714 (43.9)	<.01
No. drinks per occasion, past month, mean (SD)	2.9 (2.4)	2.1 (1.9)	<.01
No. days drank > 4 drinks, past month, mean (SD)	2.0 (3.3)	0.7 (2.2)	<.01
Tobacco use, past month, No. (%)			<.01
Every Day	36 (27.5)	97 (5.5)	
Some days	19 (14.5)	72 (4.1)	
Health Insurance, No. (%)	67 (50.8)	1318 (74.4)	<.01

Note. *Applied for food stamps, received public assistance, or not enough money to meet basic needs, prior 12 months. **Partner threatened safety, threw something, pushed, grabbed, shoved or slapped them, kicked, bit or hit with a fist, beat up, choked, forced sex and/or threatened with a knife/gun. +Missing data were excluded from the analysis.

(Taken from Grudzen et al.,2010 p 15)

Table 2B

Quantitative measures used in the study

Type of Variable	Variable Name	Items Included
Predictor	Substance Use	11. 4+ drinks last month (Etr #) 12. Marijuana past year (Y/N) 13. Cocaine past year (Y/N) 14. Meth past year (Y/N) 15. Needles past year (Y/N)
Predictor	Psychological Distress	# Days of Past 2 Weeks (0-14) 51. Felt little interest in doing things 52. Felt down, depressed, hopeless 53. Sleeping problems (falling asleep, too much sleep) 54. Tired or little energy 55. Poor appetite/ate too much 56. Felt bad about self/ failure 57. Trouble concentrating 58. Slow or fidgety
Predictor	Intimate Partner Violence	38. Safety threatened by partner/former partner, 12 mos (3pts.- Y/N/No Partner past 12 mos) All: Past 12 Mos (Y/N) Has a partner/frmr partner: 39. Thrown something at you 40. Pushed, grabbed, shoved, slapped 41. Kicked, bit, hit w/fist 42. Beaten up or choked 43. Forced sex 44. Threatened/used knife/gun
Predictor	Childhood Sexual Abuse	48. Unwanted sexual activity before 18 (Y/N)
Predictor	Adult Sexual Abuse	45.Forced sexual activity after 18 yrs old (Y/N)
Dependent	Self- Reported HIV/STI Risk	28. Condom Use 12 mos., Personal life (5 pt. Liker scale- Always to Never)
Dependent	Personal Sex Number of Sexual Partners	27. No. male sexual partners, personal life, 12 mos (Etr. #)
Dependent	Participation in Other Sex Work	67. Other than adult film have you traded sex for money, drugs, good or a place to stay life time (Y/N)

Table 3B

Relationships between Demographic Variables and Independent Variables

	N(%)	p-value(Chi Sq)	Total (%)
Binge Drinking			
Race	133	.55	
White	48(57.83)		83(62.88)
Black	15(71.43)		21(15.91)
Other	17(77.27)		22(16.67)
Missing	3(50.00)		6(4.55)
Age	122	.98	
Age Group 1 18-29	53(63.1)		84(68.85
Age Group 2 30-39	21(17.21)		28(22.95)
Age Group 3 – 40+	5(50.00)		10(8.20)
Education	75	.73	
No College	32(65.31)		49(65.33)
College	18(69.23)		26(34.67)
Income	132	.38*	
Low Income	26(68.42)		38(28.79)
High Income	42(62.69)		67(50.76)
Missing	15(55.56)		27(20.45)
Poverty	131	.59	
Not Indicated	28(66.67)		42(32.06)
Indicated	55(61.80)		89(67.94)
Marijuana			
Race	131	.84	
White	44(53.01)		83(63.36)
Black	15(71.43)		21(16.03)
Other	11(50.00)		22(16.79)
Missing	3(60.00)		5(3.82)
Age			
Age Group 1 18-29			
Age Group 2 30-39			
Age Group 3 – 40+			
Education	75	.00017*	
No College	32(65.31)		49(65.33)
College	7(26.92)		26(34.67)
Income	131	.82	
Low Income	19(50.00)		38(29.01)
High Income	39(58.21)		67(51.15)
Missing	15(57.69)		26(19.85)
Poverty	131	.88	
Not Indicated	23(54.76)		42(32.06)
Indicated	50(56.18)		89(67.94)
Cocaine			
Race	132	.32	
White	14(16.87)		83(63.36)
Black	3(14.29)		21(16.03)
Other	4(18.18)		22(16.79)
Missing	0		0
Age	122	.39	
Age Group 1 18-29	16(19.05)		84(68.85)

Age Group 2 30-39	4(14.29)		28(22.95)
Age Group 3 – 40+	1(10)		10(8.20)
Education	75	.08*	
No College	9(18.37)		49(65.33)
College	1(3.85)		26(34.67)
Income	132	.49	.75
Low Income	6(15.79)		38(29.01)
High Income	12(17.91)		67(51.15)
Missing	3(11.54)		26(19.85)
Poverty	131	.71	.71
Not Indicated	9(18.37)		49(65.33)
Indicated	1(3.85)		26(34.67)
Methamphetamines	131	.75	
Race			
White	13(15.66)		83(63.36)
Black	3(14.29)		21(16.03)
Other	2(9.09)		22(16.79)
Missing	1(20.00)		5(3.71)
Age	122	.22	
Age Group 1 18-29	15(17.86)		84(68.85)
Age Group 2 30-39	2(7.14)		28(22.95)
Age Group 3 – 40+	1(10.00)		10(8.20)
Education	75	.12*	
No College	8(16.33)		49(65.33)
College	1(3.85)		26(34.67)
Income	131	.45	
Low Income	6(15.79)		38(29.01)
High Income	8(11.94)		67(51.15)
Missing	5(19.23)		26(19.85)
Poverty	132	.27	
Not Indicated	4(9.52)		42(32.06)
Indicated	15(16.85)		89(67.94)
Needles			
Race	131	.0033*	
White	6(7.23)		83(63.36)
Black	0		0
Other	1(4.55)		22(16.79)
Missing	2 (5)		5(3.82)
Age	122	.88	
Age Group 1 18-29	5(5.95)		84(68.85)
Age Group 2 30-39	1(3.57)		28(22.95)
Age Group 3 – 40+	1(10)		10(8.20)
Education	75	.50	
No College	3(6.12)		49(65.33)
College	0		26(34.67)
Income	131	.005*	
Low Income	2(5.26)		38(29.01)
High Income	3(4.48)		67(51.15)
Missing	4(15.38)		26(19.85)
Poverty	131	.93	
Not Indicated	3(7.14)		42(32.06)
Indicated	6(6.74)		89(67.94)
Intimate Partner Violence			

Race	132	.64	
White	20 (24.10)		83(62.88)
Black	6(28.57)		21(15.91)
Other	8(36.36)		22(16.67)
Missing	1(16.67)		6(4.55)
Age	122	.17	
Age Group 1 18-29	26(30.95)		84(68.85)
Age Group 2 30-39	7(25.00)		28(22.95)
Age Group 3 – 40+	1(10.00)		10(8.20)
Education	75	.0378*	
No College	19(38.78)		49(65.33)
College	4(15.38)		26(34.37)
Income	132	.70	
Low Income	14(36.84)		38(28.79)
High Income	13(19.40)		67(50.76)
Missing	7(29.63)		27(20.45)
Poverty	131	.28	
Not Indicated	14(33.33)		42(32.06)
Indicated	21(23.60)		89(67.94)
Depression			
Race	132	.39	
White	26(31.33)		83(62.88)
Black	11(52.38)		21(15.91)
Other	5(22.73)		22(16.67)
Missing	1(16.67)		6(4.55)
Age	122	.8753	
Age Group 1 18-29	29(34.52)		84(68.85)
Age Group 2 30-39	10(35.71)		28(22.95)
Age Group 3 40+	3(30.00)		10(8.20)
Education	75	.23	
No College	18(36.73)		49(65.33)
College	6(23.08)		26(34.67)
Income	132	.60	
Low Income	19(50.00)		38(28.79)
High Income	14(20.90)		67(50.76)
Missing	10(37.04)		27(20.45)
Poverty	132	.0042*	
Not Indicated	21 (50.00)		42(32.06)
Indicated	22(24.72)		89(67.94)
Childhood Sexual Abuse			
Race	128	.25	
White	33(39.76)		83(64.84)
Black	9(42.86)		21(16.41)
Other	6(27.27)		22(17.19)
Missing	0		2(1.56)
Age	122	.0283*	
Age Group 1 18-29	27(32.14)		84(68.85)
Age Group 2 30-39	14(50.00)		28(22.95)
Age Group 3 40+	6(60.00)		10(8.20)
Education	75	.0863	
No College	19(38.78)		49(65.33)
College	5(19.23)		26(34.67)
Income	128		.7470

Low Income	20(52.63)		38(29.69)
High Income	20(29.85)		67(52.34)
Missing	8(34.78)		23(17.97)
Poverty	128	.21*	
Not Indicated	19(45.24)		42(32.81)
Indicated	29 (33.72)		86(67.19)
Adult Sexual Abuse	128	.42	
White	19(22.89)		83(64.84)
Black	8(38.10)		21(16.41)
Other	6(27.27)		22(17.19)
Missing	1(50.00)		2(1.56)
Age	122	.008*	
Age Group 1 18-29	17(20.24)		84(68.85)
Age Group 2 30-39	14(50.00)		28(28.95)
Age Group 3 – 40+	2(20.00)		10(8.20)
Education	75	.60	
No College	10(20.41)		49(65.33)
College	4(15.38)		26(34.67)
Income	128	.0263	
Low Income	16(42.11)		38(29.69)
High Income	12(17.91)		67(52.34)
Missing	6(26.09)		23(17.97)
Poverty	128	.7202	
Not Indicated	12(28.57)		42(32.81)
Indicated	22(25.58)		86(67.19)
Substance Abuse			
Race	132	.16*	
White	61(73.49)		83(62.88)
Black	17(80.95)		21(15.91
Other	18(81.82)		22(16.67)
Missing	3(50.00)		6(4.55)
Age	122	.097	
Age Group 1 18-29	70(83.33)		84(68.85)
Age Group 2 30-39	19(67.86)		28(22.95)
Age Group 3 – 40+	7(70.00)		10(8.20)
Education	75	.001*	
No College	45(91.84)		49(65.33)
College	12(46.15)		26(34.67)
Income	132	.91	
Low Income	27(71.05)		38(28.79)
High Income	52(77.61)		67(50.76)
Missing	20(74.07)		27(20.45)
Poverty	131	.33	
Not Indicated	34(80.95)		42(32.06)
Indicated	65(73.03)		89(67.94)
Syndemics			
Syndemic (Analyzed in Table 8)			
Race	132	.33	
White	18(21.7)		84(68.85)
Black	2(9.52)		28(22.95)
Other	4(18.18)		10(8.20)
Missing	4(66.67)		6(4.55)

Age	122	.88	
Age Group 1 18-29	14(16.67)		38(29.69)
Age Group 2 30-39	6(21.43)		67(52.34)
Age Group 3 – 40+	1(10)		23(17.97)
Education	75	<.001*	
No College	4(8.16)		49(65.33)
College	12(46.15)		26(34.67)
Income	132	.14**	
Low Income	4(10.53)		38(29.69)
High Income	17(25.37)		67(52.34)
Missing	7(25.93)		23(17.97)
Poverty	132	.06*	
Not Indicated	5(11.63)		
Indicated	23(25.84)		42(32.06)
Syndemic 2			89(67.94)
Race	132	.33	
White	29(34.94)		84(68.85)
Black	9(42.86)		28(22.95)
Other	8(36.36)		10(8.20)
Missing	1(16.67)		6(4.55)
Age	122	.88	
Age Group 1 18-29	32(38.10)		84(68.85)
Age Group 2 30-39	8(28.57)		28(28.95)
Age Group 3 – 40+	5(50.00)		10(8.20)
Education	75	<.001*	
No College	16(32.65)		49(65.33)
College	11(42.31)		26(34.67)
Income	132	.14**	
Low Income	13(34.21)		38(29.69)
High Income	25(37.31)		67(52.34)
Missing	9(33.33)		23(17.97)
Poverty	132	.06*	
Not Indicated	14(32.56)		42(32.06)
Indicated	33(37.08)		89(67.94)
Syndemic 3			
Race	132	.33	
White	24(28.92		84(68.85)
Black	6(28.57)		28(22.95)
Other	7(31.82)		10(8.20)
Missing	0(0)		6(4.55)
Age	122	.88	
Age Group 1 18-29	25(29.49)		84(68.85)
Age Group 2 30-39	10(35.71)		28(28.95)
Age Group 3 – 40+	2(20.00)		10(8.20)
Education	75	<.001*	
No College	18(36.73)		49(65.33)
College	3(11.54)		26(34.67)
Income	132	.14**	
Low Income	14(36.84)		38(29.69)
High Income	19(28.36)		67(52.34)
Missing	4(25.93)		23(17.97)
Poverty	132	.06*	

Not Indicated	18(41.86)		42(32.06)
Indicated	19(21.35)		89(67.94)
Syndemic 4			
Race	132	.33	
White	12(14.46)		84(68.85)
Black	4(19.05)		28(22.95)
Other	3(13.64)		10(8.20)
Missing	1(16.67)		6(4.55)
Age	122	.88	
Age Group 1 18-29	13(15.48)		84(68.85)
Age Group 2 30-39	4(14.29)		28(28.95)
Age Group 3 – 40+	2(20.00)		10(8.20)
Education	75	<.001*	
No College	11(22.45)		49(65.33)
College	0(0)		26(34.67)
Income	132	.14**	
Low Income	7(18.42)		38(29.69)
High Income	6(8.96)		67(52.34)
Missing	7(25.93)		23(17.97)
Poverty	132	.06*	
Not Indicated	6(13.95)		42(32.06)
Indicated	25(15.73)		89(67.94)

Note. Values under P<.25were used as control variables in the logistic regression models
The researcher also utilized a secondary criteria which eliminate variables that met the p.25 that were not of theoretically important
** Variables that met the p<.25 criteria but were not theoretically important

Appendix C: Qualitative Methods Information

Table 1C

Qualitative Methods and Rationale

Instrument	**Purpose**	**Participants**	**Sample Size**	**Rationale**
Observation	To determine observe AFI actresses online behaviors, reaction to 2010 HIV outbreaks and relationships with eachother	-Actresses	Creation of accounts on Twitter, Facebook, YouTube, and My Space daily observation from October 2010-May 2011	This portion of the qualitative phase was utilized to recruit AFI actresses. answer questions about the study and understand participants beliefs about the AFI
Individual Interview	To understand current risk prevention methodologies, materials provided on set, materials brought to set, preparation practices*,	-Actresses	8	This portion of the research design was utilized to better understand the factors that constrain adult films stars ability to practice safer sex behaviors. Prevention methodologies that individual actors employ

Table 2C

Ethnographic Questions

Instrument Question	**Theoretical Framework**	**Construct**	**Research Question**	**Tie to Logistic Regression**
1. What is your ethnicity?				
2. Ask Gender				
3. How many films have done? How many years in the industry?				
4. Describe your childhood..	Socio Ecological /Syndemic	External Microsystem/Childhood Sexual Abuse	1	Corroborate and Deepen Findings From LR through describing CSA and how it might currently affect them
5. How do you prepare for scenes.. (Probe for Substance Use :In past interviews individuals have said that they think drugs are common in the industry, what do you think (Probe :How do you feel before after during a scene) (are there certain types of scenes that cause you to increase drug use?) (What type?)	Socio Ecological/Syndemic	Internal Microsystems/Psychological Distress;Substance Abuse	2	Corroborate and Deepen Finding from S LR through describing triggers from Drug Use, and giving details about what might intensify drug use
6. Do you have a significant other? (Probe: How do they feel about your job?)	Socio Ecological/Syndemic	Internal Microsystems/Partner Violence	1	Corroborate and Deepen Findings from LR through discussing if their occupation might trigger partner violence. Possibly discuss Partner violence in the past and present and differences between types of partner violence
7. How are your relationships with your family and friends? (Probe about changing social networks since they entered the business) (Who are your new friends?, Are they	Ecosocial perspective	Meso system /Social Network/Social Support	1	Give insight into the mesosystem which wasn't covered in LR They can give an idea of how their occupation

in the business?) (What do you do to have fun?)				may have change their social structure, and social activities
8. If you mentioned that you wanted use condoms on set what would happen? (How would it be received, positively or negatively) (How decides if you get to use a condom?) (What would happened if you demanded to use a condom)	Ecosocial perspective	Macro System/ Political Economy of Condoms	2	Gives insight to macrolevel which wasn't covered in LR: Give insight in domains of power and hegemony in the AFI expands upon preliminary findings
9. Do you use condoms in your personal life? Why or Why not?	Ecosocial perspective	Macro System/ in particular how the occupational culture affects their personal life	2	Gives further insight into how non condom use on film might spill over into their personal life.
10.What is your experience with STIs	Ecosocial perspective	Mircosystem/ Biological and Behavioral	3	Gives further insight into how often AFI actresses experience STIs

Appendix D: IRB Materials

Recruitment Flyer

Behind the Scenes(BTS)

Researchers at University of South Florida want to learn about the lives of women in the Adult Film Industry.

Research is always voluntary!

Would the study be a good fit for you?

This study might be a good fit for you if you:

- Are over 18 years of age
- Are Female
- Have performed in more than one film

What would happen if I took part in the study?

If you decide to take part in the research study, you would give a confidential 45 minute in person or telephone interview

There may be benefits if you take part in the study.

- Get a $30 discount on monthly testing
- Get your point of view out to the world

To take part in the BTS research study or for more information, please contact Candace Sibley at:
214-755-5830 or cdsibley@mail.usf.edu

The principal researcher for this study is Candace Sibley at University of South Florida.

Informed Consent to Participate in Research
Information to Consider Before Taking Part in this Research Study

IRB Study # Pro00001463

You are being asked to take part in a research study. Research studies include only people who choose to take part. This document is called an informed consent form. Please read this information carefully and take your time making your decision. Ask the researcher or study staff to discuss this consent form with you, please ask him/her to explain any words or information you do not clearly understand. We encourage you to talk with your family and friends before you decide to take part in this research study. The nature of the study, risks, inconveniences, discomforts, and other important information about the study are listed below.

We are asking you to take part in a research study called:
A study of a possible syndemic among female adult film stars.

The person who is in charge of this research study is Candace Sibley. This person is called the Principal Investigator. However, other research staff may be involved and can act on behalf of the person in charge. She is being guided in this research by Dr Julie Baldwin.

Purpose of the study
The purpose of this study is to:
Learn more about the lives and work of adult film actresses
Learn more about the positive and negative aspects of being adult film actresses

Study Procedures
If you take part in this study, you will be asked to:
Do one sixty minute in person interview at Talent Testing Services or by telephone. This interview will be done in one session and is timed to take no more than an hour although you will be allowed to talk as long you want. The interview session will be recorded on a digital recorder and your name will not be attached to the information you give. Only Julie Baldwin, PhD and Candace Sibley will have access to the recordings and the tape will only be maintained for one calendar year. After five years, all digital recordings will be erased.
Total Number of Participants
A total of 30 individuals will participate in the study at all sites.
Alternatives
You do not have to participate in this research study.
Benefits
The potential benefits of participating in this research study include
Getting your story out to the world anonymously
Risks or Discomfort

This research is considered to be minimal risk. That means that the risks associated with this study are the same as what you face every day. There are no known additional risks to those who take part in this study.

Compensation

You will be given $30 reduction off of HIV/STI monthly testing at Talent Testing if you complete the entire scheduled interview. If you withdraw for any reason from the study before completion you will be paid $5 off of monthly testing for scheduling the interview.

Cost

The is no cost incurred for participating in the study

Your Rights:

You can refuse to participate in this study at any time during the interview. You will not be required to sign this form because the information from the interview will not be attached to your name. You will be given a physical or emailed copy of the form.

Privacy and Confidentiality

We will keep your study records private and confidential. Certain people may need to see your study records. By law, anyone who looks at your records must keep them completely confidential. The only people who will be allowed to see these records are:

The research team, including the Principal Investigator and her advisor.

Certain government and university people who need to know more about the study. For example, individuals who provide oversight on this study may need to look at your records. This is done to make sure that we are doing the study in the right way. They also need to make sure that we are protecting your rights and your safety.

The USF Institutional Review Board (IRB) and its related staff who have oversight responsibilities for this study, staff in the USF Office of Research and Innovation, USF Division of Research Integrity and Compliance, and other USF offices who oversee this research along with the Department of Health and Human Services.

We may publish what we learn from this study. If we do, we will not include your name. We will not publish anything that would let people know who you are.

Voluntary Participation / Withdrawal

You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study. You are free to participate in this research or withdraw at any time.

You can get the answers to your questions, concerns, or complaints

If you have any questions, concerns or complaints about this study, or experience an unanticipated problem, call Candace Sibley at 214-755-5830.

If you have questions about your rights as a participant in this study, general questions, or have complaints, concerns or issues you want to discuss with someone outside the research, call the USF IRB at (813) 974-5638.

Consent to Take Part in this Research Study

It is up to you to decide whether you want to take part in this study. If you want to participate in the study please tell Ms. Sibley