

# **Knowledge, Attitudes, and Practices of Women Engaged in Sex Work: An Evaluation of Source of Interventions**

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## **Abstract**

This study sampled 30 FSWs who have been involved with the intervention activities of the Silliman University Extension Office. Data were collected through personal interviews with the women using a questionnaire guide. With regards to the KAP variables and source of intervention, the results revealed no significant relationship between the source of intervention and knowledge ( $p = .41$ ). Similarly, no significant relationship was established between the source of intervention and attitude ( $p = .91$ ), as well as between the source of intervention and practice ( $p = .76$ ). Meanwhile, the research outcome between the KAP variables showed significant relationships, as follows: knowledge and attitude ( $p < .001$ ), attitude and practice ( $p = .01$ ), and knowledge and practice ( $p < .001$ ). For the relationship between demographic variables and practice, a significant difference was exhibited between the age categories of the sex workers ( $U = 32.0, p = .04$ ) and years of engagement ( $U = 53.0, p = .02$ ). In contrast, no significant difference was manifested between marital status ( $U = 99.5, p = .84$ ) and educational attainment ( $U = 103.0, p = .84$ ) categories. The results of this study can guide the formulation of efficient strategies for improving the health and well-being of FSWs.

**Keywords:** knowledge, attitude, practice, female sex worker, intervention, sex work, Silliman University

## **Introduction**

Sex work and related activities have sustained and provided livelihood to many FSWs in the Philippines. Commercial sex work is illegal in the country; for this reason, many of these FSWs remain in hiding and are undocumented. Consequently, there is an utter lack of support and protection for these women (Parmanand, 2019). Moreover, because they are “invincible” to the public, there are considerably inadequate, let alone available, sources of information on FSWs, specifically on sex tourism

activities (Gabriel & Aguilar, 2019).

The 1990s saw a significant increase in the incidence of Acquired Immune Deficiency Syndrome (AIDS) among commercial sex workers (CSWs), which then prompted the Department of Health (DOH) to aggressively promote the use of condoms among the population described above group (Human Rights Watch, 2016). Due to this alarming public health concern, several sectors of society began developing programs and interventions to address or mitigate the impending health crisis. In Dumaguete City, Dr. Fe Wale-Sycip of the Marina Clinic and former nun and community organizer Maria Leodel Sorote sprang into action by forming and organizing the Magdalena Group in 1998 (Martinez, 2012). Through the Silliman University Extension Office, the organization was officially recognized as part of the University's community program. The initial goal outlined by Dr. Wale was to educate the FSWs about Human Immune Deficiency Virus (HIV) transmission and prevention, which eventually vacillated into activities that incorporated social, spiritual, and moral aspects. Under the backdrop of the Magdalena Intervention, the FSWs were exposed to various interventions, including lecture sessions, on-hand training, and workshops. They were also provided medical or health assistance through the extension program of Silliman University. Aside from this, the FSWs regularly held their yearly meeting at the Marina Clinic Symposium Hall. Here, they are given gifts and presents donated by University administration officers and personnel. This annual gathering of the women allowed them to be involved in an interpersonal relationship forum, where they openly gave their ideas and opinions regarding their life experiences.

The crux of this study was to find out the relationship between the source of interventions and the KAP of the FSWs. This study also intends to determine the relationship between the KAP of sex workers involved in the Magdalena Intervention. Therefore, vital information and details derived from this study may aid in crafting guidelines to improve other extension programs of Silliman University. Likewise, the results of this study can provide pertinent data about the level of knowledge, attitude, and practice among sex workers involved in the Magdalena Intervention. Such information may enlighten the Silliman University Administration on the positive impact of its extension activities for sex workers.

As Silliman University has implemented various activities for the women engaged with the Magdalena Intervention, knowledge, attitude, and practices may have changed or modified over time. This paper aims to unlock these changes and evaluate them as perceived by the women who participated in the Magdalena Intervention.

Foremost among various public mandates is preserving the health and well-being of all members of society. The state must, therefore, spearhead necessary programs or actions that promote good health, peace, and security for its constituents, as outlined by Article II of the Philippine Constitution (Lawphil.net, 2022). The private sector has been at the forefront of efforts to protect the rights of sex workers and the promotion of their well-being, health, and welfare. Having said this, they have carried out various interventions to improve the lives of FSWs, such as health education, social skills development, and basic medical services.

Knowledge and attitude are two crucial variables that help explain people's inner values. Subsequently, a study (Larki et al., 2015) in Mashhad Vakil Abad Prison, Iran, revealed a significant difference between the knowledge and attitude before, immediately after, and four weeks after an educational intervention was introduced to the FSWs.

In the same breath, a study (Dong et al., 2019) in Yunnan Province, China, manifested a positive correlation between the knowledge and attitude of FSWs. This study introduced an intervention anchored on social relationships with sex workers. It was concluded in the study that social interactions could positively influence the KAP of FSWs.

The relationship between the attitude and behavior of FSWs provides important insights into analyzing their behavioral patterns. In a study (Lepine & Treibich, 2020) of Senegalese FSWs who were subjected to incentivized Gneezy and Potters (G&P) task, it concluded that the risk aversion attitude of the women is an important predictor of their sexual behaviors. Sex workers who exhibit high-risk aversion have fewer sex acts with clients and are more likely to engage in protected sex acts.

Furthermore, a study (Lari, M. et al., 2012) in Shiraz, South Iran, showed significant improvement in FSWs' attitudes and their sexual preventive behaviors relating to condom use and safe sex practices after they were introduced to a health education program. The educational program incorporated activities like face-to-face education, pamphlets, and role-playing in this study.

The association between knowledge and practice is essential in examining behavioral patterns. A certain degree of knowledge would ultimately shape behavioral trends and vice-versa. In a related study among FSWs in Zimbabwe, a program intervention that included enhanced prevention and health education did impact the incidence of HIV infection in the country. The program intervention implemented free HIV counseling by peer educators, health education, and legal advice (Cowan et al., 2018). The outcome of the intervention showed increased engagement of sex

workers in HIV testing, as well as high levels of HIV treatment availment among the women.

A related study (Ortblad et al., 2019) was conducted in Uganda, where FSWs exhibited precautionary behavior given their knowledge of their HIV status. In this study, the researchers introduced an intervention program through HIV testing among the women participants. The research discovered, among others, that those FSWs who were made aware of their being negative for HIV infection were the most likely to use condoms with clients. In contrast, the study found that knowledge of HIV status was not associated with the participant's number of clients per average working night.

Human existence is a dynamic phenomenon influenced by several social forces. People's unique demographic characteristics account for variations in attitude and behavior. Accordingly, race, age subgroups, household income, education, religious affiliations, and other demographic indices can provide valuable information and clues as to why a particular set of populations exhibits specific actions. In the world of commercial sex, demographics and their influence on actual conduct by sex workers provide a pool of insights that aid public administrators and other relevant organizations in formulating effective strategies for mitigating the spread of sexually transmitted diseases (STDs).

A correlational study (Da Penha et al., 2015) involving FSWs who are members of the Sex Workers' Association in Picos, Brazil, sought to identify the risk factors for STDs among its members. The aforementioned association's intervention programs comprise the following:

- Promotion of health and well-being of the sex workers;
- Distribution of condoms and educational materials;
- Referrals to gynecological consultations at the Family Health Strategy (FHS); and,
- Lecture about violence, drug use, and other issues.

One of the outcomes of this study disclosed no significant association between demographic variables and condom use by male partners or clients. Nevertheless, it did find a significant relationship between the number of years in the sex industry and condom use by women sex workers.

The results of a study (Nyagero et al., 2012) performed among FSWs in Nigeria found that the level of education was significantly associated with the FSWs' behavioral change. On top of this, religious affiliation was significantly associated with behavioral changes in the FSWs. The study utilized the Maanisha Programme to influence or modify the behavior of FSWs, which comprises interventions such as peer education, condom

distribution, and income-generating activities.

Intervention programs are designed to meet the specific goals and objectives of any organization. Programs, for the most part, are constructed using various models or approaches tailored to a particular group or organization. Several models have been adopted as mitigation or preventive programs for sex workers. For instance, the Multisectoral Action for Health (MAH) is an approach that forges a “relationship between part or parts of the health sector with part or parts of another sector which has been formed to take action on an issue to achieve health outcomes (Dunn et al., 2013).” As a matter of fact, this model has been applied in many health programs across the globe. For example, the Venezuelan Barrio Adentro primary care program and its associated Misiones (social programs) have employed a multisectoral approach to interventions to reduce health inequalities (Dunn et al., 2013). The Multisectoral Action for Health can also be used as a model in developing intervention programs for FSWs. Given that such an approach involves coordinating health and non-health sectors, program expectations and goals would most likely be achieved.

The Incentive Theory of Motivation expresses that certain behaviors are driven by desires for reinforcement or rewards (Cherry, 2019). Hence, in the presence of rewards, like the provision of food or clothing, FSWs may be inspired or motivated to join actively in intervention programs. Certain rewards, whether cash or kind, to be distributed among sex workers for active participation in an intervention program will promote a positive culture among sex workers and create a healthy atmosphere between the sex workers program staff and facilitators. Consequently, program objectives and desired results would be met and satisfied.

A new approach that policymakers and health administrators have popularly adopted is the Combination Prevention Program. This program model considers three factors: biomedical intervention, behavioral interventions, and structural interventions (Avert.org, 2019). In biomedical intervention, medical logistics and services are used to achieve health goals, including condom distribution, laboratory tests, and medical consultations. Behavioral interventions involve looking at the socio-cultural background of people and traditions and identifying high-risk populations to influence them to modify their behaviors effectively. Structural intervention deals with tackling legal and policy hurdles that prevent the proper delivery of health services. Such actions include strengthening health and social protection systems and addressing gender inequalities, stigma, and discrimination (Avert.org, 2019).

For the development of intervention programs for sex workers, the

Combination Prevention Program approach can be highly effective in efforts to mitigate or prevent HIV transmission. Since sociocultural aspects play an important role in shaping knowledge, attitudes, and practices, it would, therefore, serve as an ideal framework for program designs specifically for sex workers.

A recent school of thought in behavioral theories is anchored on “evident-based empowerment interventions (Wong et al., 2019).” This intervention differs from previous ones because it aims to lessen the FSWs’ psychological stress rather than focus on “harm reduction.” The philosophy of empowerment interventions led to the inception of Resilience Programs for sex workers. A notable example is the intervention used in a study (Wong et al., 2019) of 127 sex workers based in Hong Kong. The intervention, as implemented, consisted of a six-session resilience program that aimed to improve self-esteem, self-efficacy, and coping skills. The results of the study showed increased use of condoms during transactions among those who were subjected to the intervention program. It was also revealed from the study that self-esteem and resilience lead to a reduction of stress among the participants.

FSWs belong to a high-risk group for the transmission of STDs, exploitation, and human trafficking. Having said this, various public and private agencies have worked out preventive and mitigation programs that address the health and social concerns of sex workers. Programs have been devised to alleviate the plight of sex workers, and countless initiatives or efforts have been served towards promoting these women’s good health and well-being. Silliman University, with its mission to instill in the community an “enlightened social consciousness and a deep sense of justice and compassion,” organized the FSWs in Dumaguete City. The women were then exposed to workshops, trainings, and lectures geared towards lifting their physical, emotional, and social well-being. Accordingly, these endeavors influence their knowledge, attitude, and practices, which have been embedded in them as members of the Magdalena group under Silliman University’s Extension Office.

During their engagement in the Magdalena Intervention, the women were introduced to activities that aimed to develop or enhance their health status and well-being. The salient features of these interventions include AIDS and STD Prevention, Health and Access to Basic Health Services, Spiritual and Moral Development, and Social Engagement. In light of this, evaluating whether the FSWs have been influenced significantly by the Magdalena Interventions or outside channels or mediums is important.

Notwithstanding the circumstances that lead them to become

commercial sex workers, it is necessary to glean and examine crucial factors that have been ingrained through time by these FSWs. These influential “agents” provide a clear-cut overview of the essence and character of sex workers in Dumaguete City; hence, knowledge, attitude, and practice must be analyzed to appreciate their well-being and status fully. In the same fashion, dissecting the relationship of these factors between each other will give us a glimpse of the direction of their relationship. For example, if knowledge and practice are not correlated, one can surmise that an intervention may need review or re-evaluation. On another note, if the attitude is significantly related to practice, one may conclude that the intervention introduced to the women had a positive impact, in this case, the Magdalena Intervention.

The Magdalena Intervention may have influenced the perceptions of the sex workers. Thus, a high degree or level of knowledge, attitude, and practice among sex workers translates to improved health and well-being. Similarly, a significant correlation between knowledge and attitude, attitude and practice, and knowledge and practice would indicate improved health and well-being.

On the same token, demographic factors of the women, such as age and marital status, may provide information on its influence on knowledge, attitude, and practice on the salient features of the Magdalena Interventions. The details and statistical data derived from the relationship of the demographic elements can aid in assessing Magdalena’s activities or interventions.

## **Hypotheses**

Given the complex web of interplaying dynamics affecting knowledge, attitude, practice, and its relationship with the sources of interventions, the following hypothesis was tested:

1. There is no significant relationship between the source of intervention and knowledge of FSWs on the salient features of the Magdalena Intervention.
2. There is no significant relationship between the source of intervention and the attitude of FSWs toward the salient features of the Magdalena Intervention.
3. There is no significant relationship between the source of intervention and practice of FSWs on the salient features of the Magdalena Intervention.
4. There is no significant relationship between knowledge and

- attitude on the salient features or characteristics of the Magdalena Intervention among FSWs.
5. There is no significant relationship between attitude and practice on the salient features or characteristics of the Magdalena Intervention among FSWs.
  6. There is no significant relationship between knowledge and practice on the salient features or characteristics of the Magdalena Intervention among FSWs.
  7. There is no significant difference among FSWs between selected demographic variables and knowledge, attitude, and practices on the salient features or characteristics of the Magdalena Intervention.

## Methods

This is a descriptive-correlational as well as descriptive-comparative study employing nonparametric statistics. The nature of the study is descriptive as it portrays the respondents in terms of their level of knowledge, attitude, and practices. It is correlational as it endeavors to ascertain whether a significant relationship exists between the following variables:

- a. Source of intervention and knowledge;
- b. Source of intervention and attitude;
- c. Source of intervention and practice;
- d. Knowledge and attitude;
- e. Attitude and practice;
- f. Knowledge and practice; and,
- g. Selected demographic factors and practice.

Moreover, this study is also comparative since it explores the extent of difference between the respondents' selected demographic characteristics and practices.

## Participants

The respondents of this study are active or inactive members of Magdalena. For the sampling process, each subject was interviewed at a public location. The total number of samples for this study is 30 respondents. In the interview, the researcher and the interviewee wore protective masks and face shields, while physical distancing was likewise observed. Each respondent was provided with a mask and face shield to ensure the safety of both the researcher and the respondent. Hand disinfectants were also distributed to all involved in the data collection activity for added protection.



## **Instrument**

An interview was administered to each research participant through a face-to-face meeting. The direction of the discourse was guided by specific themes in the questionnaire items. The content of the questionnaire includes Likert-type 4-point scale questions, multiple choice, and a few open-ended questions. The sequence of the questions was formatted in the following manner:

- a. Description of Respondent's Profile;
- b. Knowledge Acquired by Respondents;
- c. Attitude of Respondents; and,
- d. Practice of Research Participants; and,
- e. Relevant Open-Ended Questions.

The Likert-type, 4-point scale responses appear as follows for the knowledge, attitude, and practice variables:

1 = not very true of me; 2 = not true of me, 3 = true of me, 4 = very true of me.

## **Data Gathering**

Before the commencement of the personal interview, informed consent was requested for each subject. Upon signing the consent form by the respondents, they were given a short orientation regarding the nature of the interview process. After that, the interview activity proceeded with the researcher taking down relevant notes based on the responses of each research participant. The entire interview transcript was documented by writing down relevant information in the questionnaire.

This study employed a purposive sampling methodology; respondents were admitted as subjects if they were at least 18 years of age, female, and had been engaged with the Magdalena organization for at least three years. The total number of women interviewed in this research was 30 samples.

## **Statistical Treatment**

The percentage was used to present the respondents' distribution across the category. Further, a weighted mean was employed to determine the respondents' level of knowledge, attitude, and practices.

The Chi-Square Test ( $\chi^2$ ) was utilized at  $\alpha = .05$  to establish the extent of relationships of the following variables:

- a. Source of information and knowledge;

- b. Source of information and attitude; and,
- c. Source of information and practice.

To test the relationship between the KAP variables, the researcher used Spearman's Rank-Order Correlation ( $r_s$ ) to arrive at the statistical conclusions. The variables below were then analyzed using  $r_s$  and  $p$  values:

- a. Knowledge and attitude;
- b. Attitude and practice; and,
- c. Knowledge and practice.

Meanwhile, the Mann-Whitney U Test was used to determine the significant relationship between the selected demographic variables and the practice of sex workers at 0.05 alpha ( $\alpha$ ) level of significance. Demographic aspects that were statistically tested were:

- a. Age and practice;
- b. Marital status and practice;
- c. Number of years of engagement and practice; and,
- d. Educational level and practice.

## **Ethical Considerations**

Informed consent was requested from each FSW before the survey activity. Participants were briefed so that they could withdraw anytime during the survey process and that they were apprised of their rights as research participants. All information about the participants of the study was treated with the utmost confidentiality. All the questionnaires and written transcripts used for the study were shredded or destroyed. The interviewer requested permission from the respondents to allow themselves to be queried during the activity.

The women were not asked about sensitive topics irrelevant to the study during the interview. Violent or traumatic circumstances and other sensitive and private issues in their lives were also not asked about nor discussed during data collection.

## **Results and Discussions**

This section's information flow starts with the respondents' demographic details and their corresponding statistical representations through central tendency and percentages. After that, particulars on the subjects' knowledge, attitude, and practices are laid out, including the various ranges of responses. The latter portion of the paper expounds on the relationships between the variables, as mentioned in the hypothesis of this

paper.

## Profile of Respondents

The majority (73.33%) of the respondents belong to the 26-64 age group, while the age bracket 18-25 and above 65 comprise 20% and 6.67%, respectively. As members of the Magdalena group, most women (53.33%) have been involved with the intervention for 20-24 years. Meanwhile, the remaining subjects have stayed with the group for less than 19 years. With regards to the marital status of the respondents, 30% of the sex workers are married, while 70% of the women declared that they are single.

For their educational attainment, a large chunk (40%) of the respondents have achieved high school-level education. A number of the women (23.33%) have attended elementary school, while 16.67% graduated from primary school, as opposed to only 10% who could graduate from high school. In addition, around 10% of the subjects have at least attended college. Demographic data on household income revealed that most respondents (96.7%) have a personal income below P9,520.00, and their social profile concerning religious affiliation showed that 93.30% are overwhelmingly Roman Catholics. Table 1 presents a summary of the demographic profile of the respondents.

**Table 1**

*Distribution of Respondents by Age, Marital Status, Number of Years of Engagement, Educational Attainment, Personal Income, and Religion*

| <b>Age</b>            | f  | %      |
|-----------------------|----|--------|
| 18-19                 | 3  | 10.00  |
| 20-25                 | 3  | 10.00  |
| 26-64                 | 22 | 73.33  |
| ≥ 65                  | 2  | 6.67   |
| Total                 | 30 | 100.00 |
| <b>Marital Status</b> | f  | %      |
| Married               | 9  | 30.00  |
| Single                | 21 | 70.00  |
| Total                 | 30 | 100.00 |

| <b>Total Years of Engagement</b> | f  | %      |
|----------------------------------|----|--------|
| ≤ 5                              | 7  | 23.33  |
| 6-9                              | 2  | 6.67   |
| 10-14                            | 3  | 10.00  |
| 15=19                            | 2  | 6.67   |
| 20-24                            | 16 | 53.33  |
| Total                            | 30 | 100.00 |
| <b>Education</b>                 | f  | %      |
| Elementary School Level          | 7  | 23.33  |
| Elementary School Graduate       | 5  | 16.67  |
| High School Level                | 12 | 40.00  |
| High School Graduate             | 3  | 10.00  |
| College Level                    | 3  | 10.00  |
| Total                            | 30 | 100.00 |
| <b>Personal Income</b>           | f  | %      |
| Below 9,520.00                   | 29 | 96.70  |
| Between 9,520 to 19,040.00       | 1  | 3.30   |
| Total                            | 30 | 100.00 |
| <b>Religion</b>                  | f  | %      |
| Roman Catholic                   | 28 | 93.30  |
| Protestant                       | 2  | 6.70   |
| Total                            | 30 | 100.00 |

### **Knowledge, Attitude, and Practice of Sex Workers**

Meanwhile, the respondents were queried on salient characteristics of the Magdalena Intervention for FSWs. As can be gleaned from Table 2, most respondents have a high mean score in each of the parameters relating to the Magdalena Intervention, as implemented by Silliman University. Accordingly, a total average of 3.79 would indicate a high level of acquired knowledge from the women as participants of Silliman University's Extension activities.

“I know that AIDS can be transmitted through unprotected sexual intercourse, intravenous (IV) needles, and from mother to child through pregnancy.”

From the purview of the above issue on AIDS prevention, the sex workers' average response falls under the 3.25-4.0 category (Very true of me). It may be supposed that these women have a high level of knowledge on the different avenues or ways AIDS is transmitted from person to person. The same pattern can be observed in a study (Abhik et al., 2020) among FSWs in West Bengal, India, where 76.67% knew that AIDS could be transmitted through sexual intercourse. Further, about 94.4% and 67.78% of the FSWs were knowledgeable on the transmissibility of AIDS through needle sharing and mother-to-child (gestation process), respectively.

**Table 2**

*Average Score of the Respondents in Relation to Knowledge, Attitude, and Practice*

| <b>Knowledge of FSWs</b>                   | <b>Mean Score</b> |
|--|-------------------|
| AIDS and STD Prevention                    | 3.74              |
| Health and Access to Basic Health Services | 3.82              |
| Spiritual and Moral Development            | 3.85              |
| Social Engagement                          | 3.75              |
| <b>Total Average</b>                       | <b>3.79</b>       |
| <b>Attitudes of FSWs</b>                   | <b>Mean Score</b> |
| AIDS and STD Prevention                    | 3.82              |
| Health and Access to Basic Health Services | 3.82              |
| Spiritual and Moral Development            | 3.83              |
| Social Engagement                          | 3.85              |
| <b>Total Average</b>                       | <b>3.83</b>       |
| <b>Practices of FSWs</b>                   | <b>Mean Score</b> |
| AIDS and STD Prevention                    | 2.00              |
| Health and Access to Basic Health Services | 3.51              |
| Spiritual and Moral Development            | 3.88              |
| Social Engagement                          | 3.56              |
| <b>Total Average</b>                       | <b>3.24</b>       |

*Range: 1:00-1.74=Not very true to me; 1.75-2.49=Not true to me; 2.50-3.24=True to me; 3.25-4.00=Very true to me*

The same observation can be seen in the respondents' mean score on attitudinal aspects. With a total average of 3.83 (Very true of me), it can be interpreted that the women have a high attitudinal score, as reflected in Table 2.

Such a high attitude level is also manifested in a study (Shu et al., 2020) in Lagos, Nigeria. This research evaluated FSWs' attitudes toward human Papillomavirus (HPV) infection. Consequently, 97.27% of the sex workers exhibited good attitude scores.

For the actual practices of the respondents, a total average value of 3.24 has been derived from the established parameters on the salient features of the Magdalena Intervention—notably, their practices about the elements of AIDS and STDs. Prevention resulted in a mean score of 2.0. In this aspect of the Magdalena Intervention, the women were inquired on the following items:

- Intake of medicines or antibiotics to treat AIDS and STDs;
- Refraining from any sexual contact without protection;
- Avoidance in the use of illegal drugs through intravenous (IV) means; and,
- Regular laboratory testing for HIV and STDs.

Given the low level of practice about the factors enumerated above, it may be construed that many of the sex workers have low compliance in putting into action their acquired knowledge or respective attitudes towards AIDS and STD prevention. In contrast, the women's average score for the parameters of health and access to basic health services, spiritual and moral development, and social engagement were all above 3.5 (Very true of me). Table 2 condenses the information on practice, as presented above.

## **Relationship between Sources of Intervention and Knowledge**

A crucial point of this study is the Magdalena Intervention which is part of the Extension initiatives of Silliman University. As the sex workers were immersed in various activities related to the intervention, it is necessary to evaluate whether the intervention had a significant relationship with the subjects' knowledge, attitude, and practices. To find out such phenomenon or the extent of the relationship, the researcher utilized the Chi-Square Test for independence ( $\alpha = 0.05$ ) to determine this significance, as shown below:

**Table 3**

*Relationship between Source of Intervention and Knowledge, Attitude, and Practice*

| <b>Knowledge</b>                           | $\chi^2$ | <b>p</b> |
|--|----------|----------|
| AIDS and STD Prevention                    | 3.89     | 3.74     |
| Health and Access to Basic Health Services | 3.10     | 3.82     |
| Spiritual and Moral Development            | 1.77     | 3.85     |
| Social Engagement                          | 3.06     | 3.75     |
| <b>Overall</b>                             | 1.78     | 3.79     |
| <b>Attitudes</b>                           | $\chi^2$ | <b>p</b> |
| AIDS and STD Prevention                    | 6.72     | .08      |
| Health and Access to Basic Health Services | 10.19    | .12      |
| Spiritual and Moral Development            | 0.83     | .99      |
| Social Engagement                          | 0.83     | .99      |
| <b>Overall</b>                             | 2.06     | .91      |
| <b>Practices</b>                           | $\chi^2$ | <b>p</b> |
| AIDS and STD Prevention                    | 5.27     | .07      |
| Health and Access to Basic Health Services | 2.93     | .82      |
| Spiritual and Moral Development            | 2.14     | .71      |
| Social Engagement                          | 4.74     | .58      |
| <b>Overall</b>                             | 1.86     | .76      |

$\chi^2$ =Chi square test of independence

As can be observed from Table 3, the result of the Chi-square Test showed no significant relationship between knowledge and source of intervention. The source of intervention variable, which includes either Magdalena's intervention or the outside intervention category, revealed a p-value of .41, higher than the alpha level of significance (.05). Subsequently, the knowledge of the women and source of intervention has no significant association. Withal acquired knowledge is not influenced by the type of intervention, whether from Magdalena or outside channels or mediums. This is exemplified by the p values, which are all greater than the margin of error at 0.05.

Such is not the case with the study by Larki et al. (2015), where FSWs inside the Mashhad Vakil Abad prison in Iran were introduced with a four-week educational program. The study's results divulged a significant

difference between the pre-intervention and post-intervention knowledge scores of the sex workers. Thus, the educational program improved the sex workers' knowledge. Similarly, a qualitative study (Benoit et al., 2017) conducted among Canadian sex workers who underwent a peer health education program revealed that the above intervention increased the women's knowledge about health issues. On top of that, the health education program expanded their capacity to disseminate acquired knowledge to other people.

### **Relationship between Source of Intervention and Attitude**

As with the relationship between knowledge and source of intervention, the attitude and conception of intervention did not manifest a significant relationship. As presented in Table 3, a p-value of .91 was derived from the Chi-square statistical test, which is higher than the alpha level of significance (0.05). Given this outcome, the attitude of the respondents is independent of the source of intervention. Suffice it to say, the attitudinal values of the respondents were most likely not influenced by either Magdalena's Intervention or any outside intervention.

Various intervention programs have been implemented to shape or influence the attitudinal values of FSWs. In a study (Wong et al., 2019) among sex workers in Hong Kong, the women were subjected to psychological interventions to enhance resilience and self-esteem. The program was anchored on a resilience framework and Transactional Model of Stress and Coping. After psycho-education activities, the FSWs were assessed regarding their psychological health, wherein they admitted to having developed a more positive attitude towards themselves and "felt more self-worth" after undertaking the intervention.

The chi-square statistic results, as indicated in Table 3, imply that the behavioral action or practice of the sex workers is independent of the category of the source of intervention. Specifically, Magdalena or outside intervention did not significantly influence the respondents' practice.

This contrasts with a study (Dong et al., 2019) conducted among low-fee FSWs in China on the impact of interventions in controlling the spread of human immunodeficiency virus (HIV) and STDs. The sex workers were grouped into two; the first group received intervention care, while the other group received the current standard of care. The statistical analysis (GLMM) results revealed that those receiving the intervention care had a 49% reduced infection rate with syphilis. The intervention activities included condom promotion, HIV and syphilis testing, reimbursement for syphilis



treatment costs, and free anti-retroviral therapy.

In another study (Cowan et al., 2018) among FSWs in Zimbabwe, a combination of interventions was introduced to the women to evaluate its impact on antiretroviral therapy (ART) and HIV diagnosis. These programs include free sexual health services by peer educators, antiretroviral therapy (ART) referral, health education, pre-exposure prophylaxis, and intensified community mobilization. The study results showed high levels of HIV diagnosis and increased uptake of antiretroviral therapy (ART) services among the identified FSWs. In addition, a study (Wong et al., 2019) designed a resiliency intervention program for FSWs to determine behavioral patterns among its participants. After that, a post-intervention analysis found increased condom use and a rate of consistent condom use in the intervention group.

Lastly, the consistency of the association between the source of intervention and practice can also be seen in the study done by Beckham et al. (2021) among FSWs in Sub-Saharan Africa. In this study, women were subjected to a family planning and HIV Prevention workshop where their family planning activities were evaluated. The outcome of the study showed that community empowerment-based interventions have been shown to improve consistent condom use, as well as reduce the rate of HIV infection.

## **Relationship between Knowledge, Attitude, and Practice**

This study also sought to find out the significant relationship between the following variables:

- Knowledge and attitude;
- Attitude and practice; and,
- Knowledge and practice.

For the knowledge and attitude of the sex workers, Spearman's Rank-Order Correlation test statistic revealed a significant relationship ( $r_s = 0.56$ ;  $p < .001$ ) between the variables described above. Similarly, the attitude and practice variables showed a significant relationship ( $r_s = 0.45$ ;  $p = .01$ ), while the knowledge and practice attributes of the women also disclosed a significant relationship ( $r_s = 0.63$ ;  $p < .001$ ). Table 4 highlights the strength of correlation ( $r_s$ ) and significance ( $p$ ) values of the relationships:

**Table 4***Relationship between Knowledge, Attitude, and Practice*

| <b>Variables</b>       | <b>rs</b> | <b>p</b> |
|------------------------|-----------|----------|
| Knowledge and Attitude | 0.56      | < .001*  |
| Attitude and practice  | 0.45      | .01*     |
| Knowledge and practice | 0.63      | < .001*  |

*rs*=Spearman rho; \*=Significant

As shown in Table 4, the relationship between knowledge and attitude and knowledge and practice exhibit a moderate correlation (*rs*). In like manner, the relationship between attitude and practice divulges a moderate correlation (*rs*). All in all, the knowledge, attitude, and practice of FSWs reflected significant relationships with each other, while the value of coefficients (*rs*) indicates a positive correlation. This indicates the existence of a direct relationship between the three variables. Succinctly speaking, any movement in one variable is accompanied by the same movement in the other.

Many studies have also established a positive correlation between knowledge, attitude, and practices (KAP). For instance, an investigation (Dong et al., 2019) among FSWs revealed a highly positive correlation between their knowledge, attitude, and practice on HIV/AIDS Prevention. Based on a multi-layer FSW social network model, this study recommended using peer education and social interaction-based interventions to aid in efforts to contain the spread of HIV/AIDS. This is further supported by the study of Avwioro et al. (2021), wherein the knowledge of FSW indicated a positive relationship concerning their practices. The survey, conducted in the Niger Delta, Nigeria, sought to determine the KAP of FSWs concerning COVID-19 infection. Withal, a study by Patricio et al. 2018 found statistical significance between knowledge of HIV/AIDS and practice. This study was conducted among FSWs in Paraiba, Brazil.

### **Relationship between Demographic Factors and Practice**

The nature of demographic characteristics can provide a bird's eye view of how certain behavioral aspects manifest in people. Along this line, demographic factors such as age, marital status, educational attainment, and longevity of experience will ultimately influence the actual practices of sex workers. It is, therefore, important to analyze how these demographic

characteristics affect behavioral patterns among FSWs. As with this research, the Mann-Whitney U Test was employed to identify the significant difference between demographic variables and practices of the respondents. The statistical test results are encapsulated in the table below:

**Table 5**

*Differences in the Respondents' Practices as Grouped into Demographic Categories*

| <b>Age (in years)</b>                 | <b>Mean Rank</b> | <b>U</b> | <b>p</b> |
|---------------------------------------|------------------|----------|----------|
| ≤ 25                                  | 8.8              |          |          |
| ≥ 26                                  | 17.2             |          |          |
|                                       |                  | 32.0     | .04*     |
| <b>Marital Status</b>                 | <b>Mean Rank</b> | <b>U</b> | <b>p</b> |
| ≤ 25                                  | 8.8              |          |          |
| ≥ 26                                  | 17.2             |          |          |
|                                       |                  | 32.0     | .04*     |
| <b>Years of Engagement (in years)</b> | <b>Mean Rank</b> | <b>U</b> | <b>p</b> |
| ≤ 19                                  | 11.3             |          |          |
| ≥ 20                                  | 19.2             |          |          |
|                                       |                  | 53.0     | .02*     |
| <b>Educational Attainment</b>         | <b>Mean Rank</b> | <b>U</b> | <b>p</b> |
| Elementary                            | 15.1             |          |          |
| High School                           | 15.8             |          |          |
|                                       |                  | 103.0    | .84      |

*U=Mann-Whitney U test; \*=Significant*

A closer examination of Table 5 would reveal significant differences in the age categories of the sex workers. Here, the mean ranks of the women's ages (≤ 25 and ≥ 26) were compared using the Mann-Whitney U test, which resulted in a value of  $U = 32.0$ . Further statistical testing unveiled a value of  $p = .04$ , which signifies a significant difference between the age as mentioned earlier categories. Women in the ≤ 25 age bracket tend to have less practice than women whose ages are included in the ≥ 26 age bracket.

It is worth mentioning that a study conducted in Andhra Pradesh, India (Hemalatha et al., 2010) among FSWs revealed non-association

between their ages and practices. In this study, the women's age did not influence their consistent use of condoms (CUC).

A different outcome can be observed with the category of civil status of sex workers. With a p-value of .84, the relationship between civil status and practice did not differ significantly. Hence, regardless of whether the sex worker is single, it did not influence their practices. This result is more or less synonymous with the study by Hemalatha et al. among FSWs in India, wherein marital status did not influence their consistent use of condoms (CUC).

The total number of years ( $\leq 19$  and  $\geq 20$ ) of sex worker engagement with the Magdalena activities also showcased a significant difference ( $U = 53.0, p = .02$ ). Thus, it can be inferred that the number of years of engagement with Magdalena Intervention increases the level of practice among sex workers.

Lastly, the educational level, classified as elementary or high school, did not convey a significant difference ( $p = .84$ ). Compliance or practice, therefore, did not differ based on educational level. In a similar pattern, the result is comparable to a study by Nicolau & Pinheiro (2012) among sex workers in Brazil, where educational level did not significantly affect their practice, specifically in using condoms. The study was done in a female prison facility.

## **Perceptions and Views of Sex Workers towards the Magdalena Intervention**

So that an in-depth revelation may be unmasked from the women's perspective towards Silliman University's extension activity about the Magdalena Intervention, open-ended questions were asked during the interview of the respondents. Eventually, the following themes comprise the query setup:

- a. Social impact of the Magdalena Intervention;
- b. The success of the Magdalena Intervention;
- c. Perceived inadequacies of the Magdalena Intervention;
- d. Willingness to continue engaging with Magdalena Intervention;
- and,
- e. Continuance of the Magdalena Intervention.

Regarding the social impact of the Magdalena Intervention, a large majority (29 out of 30) of the sex workers believed that the Magdalena Intervention had been a force for good towards society. The sex workers

emphasized how the intervention changed their respective lives for the better. Many women acknowledged that the trainings and seminars they attended had contributed significantly to their practice of safe sex, thus protecting them from acquiring AIDS and STDs. They also attributed that their daily lectures on good health and hygiene encouraged them to undergo regular medical check-ups and avail of free medicines from the government. The sex workers were also asked about their view of the success of the Magdalena Intervention in improving their conditions physically, socially, and spiritually. All of the respondents acknowledged that the intervention was a success, many of them giving the following reasons, viz:

- The Magdalena-related activities have significantly changed their lives for the better;
- The livelihood skills that they have learned allowed them to earn a living;
- It has developed their character on fairness, justice, and respect toward other people;
- The Magdalena lectures about spirituality lead them to honor and fear God and,
- The regular prayer meetings eventually guided the women to the right path in life.

As with any organization or intervention, there may be perceived shortcomings or deficiencies in matters of operation and how its management or leadership handles it. The Magdalena group is no exception, and suffice it to say, several sex workers aired out some aspects that need improvement or modification. These concerns include:

- Increasing the number of regular meetings each year;
- Expanding financial support for the Magdalena Intervention;
- Monitoring of sex worker attendance and status in the organization;
- The need to boost lecture series about AIDS and STD prevention;
- Recruitment of more sex workers to join the Magdalena group; and,
- The need for sex workers to remain active or continuously engaged in the intervention.

When the women were asked during the interview whether they were still willing to join or be engaged with the Magdalena Intervention, 29 out of 30 responded in the affirmative. This shows that the FSWs are still very interested in committing to the intervention and other related activities.

The latter part of the interview explored the sex workers' impression of whether the Magdalena Intervention should continue as part of Silliman University extension activities. The resulting inquiry revealed that all the

women wanted the Magdalena intervention to continue. When further asked why the intervention should continue, the FSWs gave the following responses:

- The Magdalena Intervention has provided them with knowledge of AIDS and STD prevention;
- The intervention can increase their knowledge and skills relating to livelihood or earning a living;
- They wanted to share their learning experiences with other people, particularly the youth, and,
- The women expressed their desire to learn more from the lectures and trainings of the Magdalena Intervention.

### Summary

This study has shown that the Magdalena Intervention, as one of the extension activities of Silliman University, had no effect or influence on the knowledge, attitude, and practices of the sex workers. These activities are reflected through four major themes, namely, AIDS and STD Prevention, Health and Access to Basic Health Services, Spiritual and Moral Development, and Social Engagement. Many reasons may be postulated regarding this phenomenon. One is that the Magdalena Intervention, as instituted by Silliman University, is composed of a series of informal type of activities that cater to the health and well-being of the sex workers. These activities, implemented for about two decades, were not structured as projects or programs. No formal assessments or evaluations were conducted vis-à-vis the KAP of the women after undertaking each activity at the time. In retrospect, if evaluations were done after each activity, a different result may have emerged from a statistical perspective.

Second, it has to be emphasized that as the intervention was accomplished through the years, the sex workers' engagement was inconsistent in terms of participation. That being so, there were varying participatory conducts among the sex workers, which can greatly affect their perception or practice with the intervention. This is supported by the fact that in this study, the number of years of engagement of the sex workers with the Magdalena Intervention had a significant relationship with their practices.

Finally, the activities introduced to the sex workers were a mixture of many types of interventions, which the women may have also learned from other sources or experiences. A generic approach towards intervention certainly lacks focus and may not necessarily be the best type of

engagement activity, practically or financially, for the FSWs. Thereupon, this may explain why the Magdalena Intervention did not influence in a significant way the KAP of the sex workers.

To cap it all, the Magdalena Intervention may still be construed as a successful endeavor due to the following:

- The high degree of knowledge, attitude, and practice of the sex workers;
- The qualitative inquiry revealed that the vast majority of the sex workers acknowledged the positive impact of the Magdalena Intervention in changing their lives for the better;
- The overwhelming desire of the FSWs to continue their engagement with the Magdalena Intervention;
- All of the sex workers admitted during the interview that the Magdalena Intervention was a success, and,
- All of the women stated that they wanted the continuance of the Magdalena Intervention as one of the extension activities of Silliman University.

## **Conclusions and Recommendations**

This study showed no significant relationship between knowledge and source of intervention. Likewise, no significant relationship was established between attitude and source of intervention. Furthermore, this research found no significant relationship between practice and source of intervention. Nonetheless, the outcome on the relationship between knowledge and attitude showed a significant association and the relationship between attitude and practice. The knowledge and practice variables exhibited a significant relationship as well.

Lastly, specific demographic factors were statistically tested to determine significant differences. As such, the study found a significant difference between the age and practice of the sex workers. In like manner, the number of years of engagement and practice also manifested significant differences. On the contrary, marital status and practice displayed no significant difference. The same outcome is revealed regarding educational level and practice. That is, there was no significant difference between the variables mentioned above.

Given the facts and statistical details presented in this paper, the following propositions are dispensed with:

1. The non-significance of the relationship between the source of intervention and the KAP of the sex workers may have been brought

about by the implementation of informal and non-structured intervention activities. Therefore, it is highly recommended that a program or project endeavor be developed specifically catering to FSWs in Dumaguete City. Along this line, standardized evaluation parameters that meaningfully measure the goals and objectives of the project or program must be established or documented. A quantitative assessment can be performed to objectively measure improvements or success rates of the project or program based on standardized criteria.

2. The results of this study on KAP of the sex workers found a significant relationship between knowledge and attitude, attitude and practice, and knowledge and attitude. In the context of such a relationship, it may be concluded that the women's KAP markedly influenced each other, connoting positive learning and behavioral processes. Notwithstanding, it has to be noted that the Magdalena Intervention has no significant relationship with the women's KAP. For this reason, in designing any project or program initiatives for FSWs, the vision, mission, and goals must be clearly laid out, and specific strategies must be formulated to achieve the goals and objectives set. Program or project contents and activities must be tailored within the ambit of the tenets mandated by the program or project endeavor.
3. The relationship between demographics and practice revealed a significant difference between age and practice and the number of years of engagement and practice. These findings provide relevant clues in managing programs and projects for FSWs. As for the age of the sex workers, project or program configurations must consider the ages of the women. That is, the project or program activities blueprint should be efficient in enhancing the practice of FSWs, in particular, the younger age group category. Analogously, the number of years of engagement also gives crucial ideas for a successful project or program endeavor. Therefore, any program or project plan must appraise the time it would take to implement it well. From the purview of this study, it is recommended that any project or program endeavor be implemented at a longer time or duration. This is to ensure efficiency and ultimately enhance further the practice of sex workers.
4. Lastly, this research recommends that the Extension Office or Extension Program Director prioritize identified programs or project proposals so that relevant and appropriate activities that



align with the vision, mission, and strategies of Silliman University and the Extension Office itself can be incorporated. This will ensure efficiency and high-quality imprints in any intervention endeavor that Silliman University will embark on for the FSWs.

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